

XIZUMINT Driver Manual

Izumi FA-1/1J/2/2J Network Protocol Driver



IZUMI
FA-1/1J
FA-2/2J
FA-3S
FA-Micro1



CPKSoft Engineering

Process Monitoring and Industrial
Automation Software

Copyright 1990-2008, CPKSoft Engineering. All rights reserved.

Index

1.	Introduction	3
2.	Driver details	4
2.1.	Driver overview	4
2.2.	Supported devices.....	4
3.	Command list	5
3.1.	Read I/O (Input or Output)	5
3.2.	Read IR (Internal Relay)	5
3.3.	Read SFR (Shift Register)	5
3.4.	Read TIM (Timer)	6
3.5.	Read CNT (Counter)	6
3.6.	Read PLC (Program Error Data)	7
3.7.	Read DR (Data Register).....	7
3.8.	Read Expansion DR	7
3.9.	Read 10msec Timer	8
3.10.	Read Expansion I/O.....	8
3.11.	Read Expansion IR	9
3.12.	Write TIM Preset Value	9
3.13.	Write CNT Preset Value.....	9
3.14.	Read PLC Status.....	10
3.15.	Read PLC Error Data.....	10
3.16.	Send PLC Error Cancel	11
3.17.	Send Communication Cancel	11
3.18.	Read TIM Preset Value	11
3.19.	Read CNT Preset Value.....	12
3.20.	Write I/O (Input or Output)	12
3.21.	Write IR.....	13
3.22.	Write SFR.....	13
3.23.	Write Expansion I/O.....	13
3.24.	Write Expansion IR	14
3.25.	Write System Work Area	14
3.26.	Write DR	15
3.27.	Write Expansion DR.....	15
3.28.	Read System Work Area	15
3.29.	Read System Version	16
3.30.	TIM/CNT Preset Value Clear.....	16
3.31.	Read HSC (High Speed Counter) (FA-1 Only).....	17
3.32.	Write HST Preliminar Output 1 (FA-1 Only).....	17
3.33.	Write HST Preliminar Output 2 (FA-1 Only).....	17
3.34.	Read HST Preliminar Output 1 (FA-1 Only).....	18
3.35.	Read HST Preliminar Output 2 (FA-1 Only).....	18
4.	Appendices	20
4.1.	Error messages	20
4.2.	Keywords list.....	20

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 xizumint.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 xizumint.tlk driver is available in plain-C language for additional USD 299 if you own a license of TAS-HMITalk 8.04 or higher.

Refer to the following link to visit the xizumint driver page at CPKSoft Engineering website: <http://www.cpksoft.com/tabid/55/ProductID/58/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>.

We welcome your comments about this document. You can reach us by e-mail at [contact @ cpksoft.com](mailto:contact@cpksoft.com).

2. Driver details

2.1. Driver overview

XIZUMINT driver allows you to connect to IDEC IZUMI Corp. FA-1J/FA-2/ FA-2J Series equipment on a network basis. (There is another limited driver version which allows you to connect to a controller point to point called XIZUMIFA, which includes FA-1/FA-1J/FA-2/FA-2J equipment)

2.2. Supported devices

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

- IDEC IZUMI PLC Micro-1 Series
- IDEC IZUMI PLC FA-1 Series
- IDEC IZUMI PLC FA-1J Series
- IDEC IZUMI PLC FA-2 Series
- IDEC IZUMI PLC FA-2J Series
- IDEC IZUMI PLC FA-3S/CP-11 Series
- IDEC IZUMI PLC FA-3S/CP-11T Series

3. Command list

3.1. Read I/O (Input or Output)

Type of data handled by this command:

Analog Input / Digital Input

Number of points accepted by this command:

Analog Input=1, Digital Input=8.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

1

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.2. Read IR (Internal Relay)

Type of data handled by this command:

Analog Input / Digital Input

Number of points accepted by this command:

Analog Input=1, Digital Input=8.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

2

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.3. Read SFR (Shift Register)

Type of data handled by this command:

Analog Input / Digital Input

Number of points accepted by this command:

Analog Input=1, Digital Input=8.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

3

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.4. Read TIM (Timer)

Type of data handled by this command:

Analog Input / Digital Input

Number of points accepted by this command:

Analog Input=1, Digital Input=16.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

4

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.5. Read CNT (Counter)

Type of data handled by this command:

Analog Input / Digital Input

Number of points accepted by this command:

Analog Input=1, Digital Input=16.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

5

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.6. Read PLC (Program Error Data)

Type of data handled by this command:

Analog Input / Digital Input

Number of points accepted by this command:

Analog Input=1, Digital Input=24.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

6

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.7. Read DR (Data Register)

Type of data handled by this command:

Analog Input / Digital Input

Number of points accepted by this command:

Analog Input=1, Digital Input=8.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

7

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.8. Read Expansion DR

Type of data handled by this command:

Analog Input / Digital Input

Number of points accepted by this command:

Analog Input=1, Digital Input=8.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

8

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.9. Read 10msec Timer

Type of data handled by this command:

Analog Input / Digital Input

Number of points accepted by this command:

Analog Input=1, Digital Input=8.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

9

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.10. Read Expansion I/O

Type of data handled by this command:

Analog Input / Digital Input

Number of points accepted by this command:

Analog Input=1, Digital Input=8.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

10

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.11. Read Expansion IR

Type of data handled by this command:

Analog Input / Digital Input

Number of points accepted by this command:

Analog Input=1, Digital Input=8.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

11

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.12. Write TIM Preset Value

Type of data handled by this command:

Analog Output / Digital Output

Number of points accepted by this command:

Analog Output=1, Digital Output=16.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

12

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.13. Write CNT Preset Value

Type of data handled by this command:

Analog Output / Digital Output

Number of points accepted by this command:

Analog Output=1, Digital Output=16.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

13

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.14. Read PLC Status

Type of data handled by this command:

Analog Input / Digital Input

Number of points accepted by this command:

Analog Input=1, Digital Input=32.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

14

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.15. Read PLC Error Data

Type of data handled by this command:

Analog Input / Digital Input

Number of points accepted by this command:

Analog Input=1, Digital Input=32.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

15

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.16. Send PLC Error Cancel

Type of data handled by this command:

Analog Output / Digital Output

Number of points accepted by this command:

Analog Output=1, Digital Output=32.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

16

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.17. Send Communication Cancel

Type of data handled by this command:

Analog Output / Digital Output

Number of points accepted by this command:

Analog Output=1, Digital Output=32.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

17

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.18. Read TIM Preset Value

Type of data handled by this command:

Analog Input / Digital Input

Number of points accepted by this command:

Analog Input=1, Digital Input=16.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

18

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.19. Read CNT Preset Value

Type of data handled by this command:

Analog Input / Digital Input

Number of points accepted by this command:

Analog Input=1, Digital Input=16.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

19

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.20. Write I/O (Input or Output)

Type of data handled by this command:

Analog Output / Digital Output

Number of points accepted by this command:

Analog Output=1, Digital Output=1.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

20

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.21. Write IR

Type of data handled by this command:

Analog Output / Digital Output

Number of points accepted by this command:

Analog Output=1, Digital Output=1.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

21

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.22. Write SFR

Type of data handled by this command:

Analog Output / Digital Output

Number of points accepted by this command:

Analog Output=1, Digital Output=8.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

22

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.23. Write Expansion I/O

Type of data handled by this command:

Analog Output / Digital Output

Number of points accepted by this command:

Analog Output=1, Digital Output=1.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

23

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.24. Write Expansion IR

Type of data handled by this command:

Analog Output / Digital Output

Number of points accepted by this command:

Analog Output=1, Digital Output=1.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

24

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.25. Write System Work Area

Type of data handled by this command:

Analog Output / Digital Output

Number of points accepted by this command:

Analog Output=1, Digital Output=8.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

25

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.26. Write DR

Type of data handled by this command:

Analog Output / Digital Output

Number of points accepted by this command:

Analog Output=1, Digital Output=32.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

27

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.27. Write Expansion DR

Type of data handled by this command:

Analog Output / Digital Output

Number of points accepted by this command:

Analog Output=1, Digital Output=32.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

28

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.28. Read System Work Area

Type of data handled by this command:

Analog Input / Digital Input

Number of points accepted by this command:

Analog Input=1, Digital Input=8.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

30

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.29. Read System Version

Type of data handled by this command:

Analog Input / Digital Input

Number of points accepted by this command:

Analog Input=1, Digital Input=24.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

33

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.30. TIM/CNT Preset Value Clear

Type of data handled by this command:

Analog Output / Digital Output

Number of points accepted by this command:

Analog Output=1, Digital Output=16.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

34

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.31. Read HSC (High Speed Counter) (FA-1 Only)

Type of data handled by this command:

Analog Input / Digital Input

Number of points accepted by this command:

Analog Input=1, Digital Input=32.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

35

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.32. Write HST Preliminar Output 1 (FA-1 Only)

Type of data handled by this command:

Analog Output / Digital Output

Number of points accepted by this command:

Analog Output=1, Digital Output=32.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

36

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.33. Write HST Preliminar Output 2 (FA-1 Only)

Type of data handled by this command:

Analog Output / Digital Output

Number of points accepted by this command:

Analog Output=1, Digital Output=32.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

37

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.34. Read HST Preliminar Output 1 (FA-1 Only)

Type of data handled by this command:

Analog Input / Digital Input

Number of points accepted by this command:

Analog Input=1, Digital Input=32.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

38

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

3.35. Read HST Preliminar Output 2 (FA-1 Only)

Type of data handled by this command:

Analog Input / Digital Input

Number of points accepted by this command:

Analog Input=1, Digital Input=32.

Meaning of the DriverP0 parameter:

Controller number (1-255). (If a 0 is entered, there will be no previous controller selection, thus the message will be routed to the last selected controller.)

Meaning of the DriverP1 parameter:

39

Meaning of the DriverP2 parameter:

Indicates the memory address of the selected element.

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
- [1419] PROTOCOL (Format): Missing bytes in response
- [1429] PROTOCOL (Format): Unknown response
- [1433] PROTOCOL (Format): Validation error in device response
- [2209] CONFIG (NumValues): Too many values (max=32)
- [3022] CONFIG (P0): Invalid device address (1-255)
- [3508] CONFIG (P1): Invalid command
- [4001] CONFIG (P2): Invalid address
- [8002] CONFIG (Remote): Abnormal receive command (receive error)
- [8279] CONFIG (Remote): Program transfer/write Overtime/frame error
- [8280] CONFIG (Remote): Program transfer/write Read/write error
- [8281] CONFIG (Remote): Program transfer/write ROM pack
- [8282] CONFIG (Remote): Program transfer/write TOTAL
- [8290] CONFIG (Remote): Receive data over (PLC size error)
- [8291] CONFIG (Remote): Receive inhibit (PLC run error)
- [8347] CONFIG (Remote): Unknown error

4.2. Keywords list

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

"CP11, CP11T, FA1, FA1/1J/2/2J, FA1J, FA2, FA2J, FA3S, IDEC, IZUMI, Micro1, Network, PLC, Series".