

Industrial communication solutions for Windows

XHITACHE Driver Manual

Hitachi PLCs EB/EC/EM-II Series Protocol Driver

Contents

XHITACHE technical specifications	2
General information.....	2
Command list	2
Commands.....	2
Read Status.....	2
Read Registered Data	2
Read I/O Monitor Data as Bytes.....	2
Read I/O Monitor Data as Words	3
Set CPU In Run Mode	3
Set CPU In Stop Mode.....	3
Write Registered Data.....	4
Forced Set/Reset in Byte Mode	4
Forced Set/Reset in Word Mode (EM-II Only)	4
Change Preset Value of T/C (EM-II Only)	5
PLC Address Table	5
Error messages	5
Supported devices.....	5

CPKSoft Engineering

Industrial communication
drivers.

www.cpksoft.com

[www.facebook.com/
cpksoftengineering](https://www.facebook.com/cpksoftengineering)

[cpksoftengineering@
hotmail.com](mailto:cpksoftengineering@hotmail.com)

phone: 54-911-45788354

1990-2012

Industrial communication solutions for Windows

XHITACHE technical specifications

General information

XHITACHE driver allows you to connect to the HITACHI programmable controllers of EB, EC and EM-II series.

Command list

Commands

Read Status

Description of this command:

Reads the CPU Status.

Methods used to run this command:

Analog Input

Number of points accepted by this command:

1

Meaning of the DriverP0 parameter:

Identifies the station number (0-255).

Meaning of the DriverP1 parameter:

11

Values that are returned:

Value in PointValue (0) = 0 - Stop, 1 - Error, 2 - Run.

Read Registered Data

Description of this command:

Allows you to read the configuration data of one or more consecutive addresses of the Monitor Table (MT) (See: PLC address table).

Important note:

The MT is used to read data from the PLC (i.e. state of inputs, outputs, internal registers and timers/counters). There are three commands used to configure and access the

MT's contents. Those commands are:

- Read Registered Data (DriverP1=31): Reads the MT's configuration.

- Write Registered Data (DriverP1=32): Writes the MT's configuration.

- Read I/O Monitor Data (DriverP1=33): Reads the MT's contents. The MT must be configured before attempting to read it.

Methods used to run this command:

Analog Input

Number of points accepted by this command:

1-60

Meaning of the DriverP0 parameter:

Identifies the station number (0-255).

Meaning of the DriverP1 parameter:

31

Meaning of the DriverP2 parameter:

Indicates the first address to read (0-119).

Read I/O Monitor Data as Bytes

Description of this command:

Allows you to read the values within the Monitor Table (MT) as bytes (ranging from 0 to 255).

Important note:

The MT is used to read data from the PLC (i.e. state of inputs, outputs, internal registers and timers/counters). There are three commands used to configure and access the

MT's contents. Those commands are:

CPKSoft Engineering

Industrial communication drivers.

www.cpksoft.com

www.facebook.com/

cpksoftengineering

cpksoftengineering@

hotmail.com

phone: 54-911-45788354

1990-2012

Industrial communication solutions for Windows

- Read Registered Data (DriverP1=31): Reads the MT's configuration.
- Write Registered Data (DriverP1=32): Writes the MT's configuration.
- Read I/O Monitor Data (DriverP1=33): Reads the MT's contents. The MT must be configured before attempting to read it.

Methods used to run this command:

Analog Input / Digital Input

Number of points accepted by this command:

1-120

Meaning of the DriverP0 parameter:

Identifies the station number (0-255).

Meaning of the DriverP1 parameter:

33

Meaning of the DriverP2 parameter:

Indicates the first address to read (0-119).

Meaning of the DriverP3 parameter:

0

Read I/O Monitor Data as Words

Description of this command:

Allows you to read the values within the Monitor Table (MT) as words (ranging from 0 to 65535).

Important note:

The MT is used to read data from the PLC (i.e. state of inputs, outputs, internal registers and timers/counters). There are three commands used to configure and access the

MT's contents. Those commands are:

- Read Registered Data (DriverP1=31): Reads the MT's configuration.
- Write Registered Data (DriverP1=32): Writes the MT's configuration.
- Read I/O Monitor Data (DriverP1=33): Reads the MT's contents. The MT must be configured before attempting to read it.

Methods used to run this command:

Analog Input / Digital Input

Number of points accepted by this command:

1-60

Meaning of the DriverP0 parameter:

Identifies the station number (0-255).

Meaning of the DriverP1 parameter:

33

Meaning of the DriverP2 parameter:

Indicates the first address to read (0-119).

Meaning of the DriverP3 parameter:

1

Set CPU In Run Mode

Description of this command:

Allows you to set the PLC in RUN mode.

Methods used to run this command:

Digital Output

Number of points accepted by this command:

1

Meaning of the DriverP0 parameter:

Identifies the station number (0-255).

Meaning of the DriverP1 parameter:

12

Set CPU In Stop Mode

Description of this command:

Allows you to set the PLC in STOP mode.

Methods used to run this command:

Digital Output

Number of points accepted by this command:

1

CPKSoft Engineering

Industrial communication drivers.

www.cpksoft.com

www.facebook.com/

cpksoftengineering

cpksoftengineering@

hotmail.com

phone: 54-911-45788354

1990-2012

Industrial communication solutions for Windows

Meaning of the DriverP0 parameter:

Identifies the station number (0-255).

Meaning of the DriverP1 parameter:

13

Write Registered Data

Description of this command:

Allows you to configure the Monitor Table (MT). This configuration determines the PLC's internal values that will be read from the PC. The PointValue property indicates the address of the element to be displayed in the MT (See: PLC address table).

Important note:

The MT is used to read data from the PLC (i.e. state of inputs, outputs, internal registers and timers/counters). There are three commands used to configure and access the

MT's contents. Those commands are:

- Read Registered Data (DriverP1=31): Reads the MT's configuration.
- Write Registered Data (DriverP1=32): Writes the MT's configuration.
- Read I/O Monitor Data (DriverP1=33): Reads the MT's contents. The MT must be configured before attempting to read it.

Methods used to run this command:

Analog Output

Number of points accepted by this command:

1-60

Meaning of the DriverP0 parameter:

Identifies the station number (0-255).

Meaning of the DriverP1 parameter:

32

Meaning of the DriverP2 parameter:

Indicates the first address to write (0-119).

Forced Set/Reset in Byte Mode

Description of this command:

Allows you to write the variable's value to any PLC element.

Methods used to run this command:

Analog Output / Digital Output

Number of points accepted by this command:

1

Meaning of the DriverP0 parameter:

Identifies the station number (0-255).

Meaning of the DriverP1 parameter:

40

Meaning of the DriverP2 parameter:

Indicates the address of the element to be written (0-1407). (See PLC address table).

Meaning of the DriverP3 parameter:

0

Forced Set/Reset in Word Mode (EM-II Only)

Description of this command:

Allows you to write the variable's value to any PLC element.

Methods used to run this command:

Analog Output / Digital Output

Number of points accepted by this command:

1

Meaning of the DriverP0 parameter:

Identifies the station number (0-255).

Meaning of the DriverP1 parameter:

40

Meaning of the DriverP2 parameter:

Indicates the address of the element to be written (0-1407). (See PLC address table).

Meaning of the DriverP3 parameter:

1

CPKSoft Engineering

Industrial communication drivers.

www.cpksoft.com

www.facebook.com/

cpksoftengineering

cpksoftengineering@

hotmail.com

phone: 54-911-45788354

1990-2012

Industrial communication solutions for Windows

Change Preset Value of T/C (EM-II Only)

Description of this command:

Allows you to write the preset value of a Timer or Counter. The value of the variable indicates the time to set in the preset.

Methods used to run this command:

Analog Output

Number of points accepted by this command:

1

Meaning of the DriverP0 parameter:

Identifies the station number (0-255).

Meaning of the DriverP1 parameter:

24

Meaning of the DriverP2 parameter:

Indicates the T/C address to write (0-95).

[PLC Address Table] Address	I/O Number		
000H-00FH	X000-X015	010H-01FH	X020-X035 020H-02FH
X040-X055 030H-03FH	X060-X075	040H-04FH	X080-X095 050H-05FH
X100-X115 060H-06FH	X120-X135	070H-07FH	X140-X155 080H-08FH
X160-X175 090H-09FH	X180-X195	0A0H-0AFH	Y200-Y215 0B0H-0BFH
Y220-Y235 0C0H-0CFH	Y240-Y255	0D0H-0DFH	Y260-Y275 0E0H-0EFH
Y280-Y295 0F0H-0FFH	Y300-Y315	100H-10FH	Y320-Y335 110H-11FH
Y340-Y355 120H-12FH	Y360-Y375	130H-13FH	Y380-Y395 140H-23FH
M400-M655 240H-33FH	M700-M955	340H-35FH	M960-M991 3A0H-3FFH
T/C000-T/C095 400H	T/C100	402H	T/C101 4BEH
T/C195 4C0H	T/C200	4C2H	T/C201 57EH
T/C295			

PLC Address Table

Error messages

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

- [1005] DRIVER (Internal): Invalid driver stage
- [1300] PROTOCOL (Timeout): No answer
- [1433] PROTOCOL (Format): Validation error in device response
- [2147] CONFIG (NumValues): Only one value can be read or written
- [2175] CONFIG (NumValues): Too many values (max=1)
- [2182] CONFIG (NumValues): Too many values (max=120)
- [2227] CONFIG (NumValues): Too many values (max=60)
- [3014] CONFIG (P0): Invalid device address (0-255)
- [3508] CONFIG (P1): Invalid command
- [4011] CONFIG (P2): Invalid address to read (0-119)
- [4012] CONFIG (P2): Invalid address to write (0-119)
- [4066] CONFIG (P2): Invalid I/O number to write (0-1407)
- [4109] CONFIG (P2): Invalid T/C address to write (0-95)
- [4533] CONFIG (P3): Invalid data type (0=byte/1=word)
- [8121] CONFIG (Remote): Error has occurred
- [8301] CONFIG (Remote): Replying station is other than required

Supported devices

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

- HITACHI PLC EB-Series
- HITACHI PLC EC-Series
- HITACHI PLC EM-II-Series

CPKSoft Engineering

Industrial communication drivers.

www.cpksoft.com

www.facebook.com/

cpksoftengineering

cpksoftengineering@

hotmail.com

phone: 54-911-45788354

1990-2012