

eWon drivers - Driver Details

Omron Host-Link

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1. Omron Host Link Driver Details

The Host Link driver supports:

- Multi-link System configuration (Single-Link System not supported);
- CIO and DM areas (other areas not supported);
- Independent block size configuration for each device;
- Single-framed block response (for <30 words block requests);
- Multi-framed block response (for >30 words block requests);
- Error response code list.

1.1. Serial port configuration

Default device configuration: 9600 7-E-2

Serial port configuration tag description (example):

OmronHostLinkPort**Serial**comm:com:1;baudrate=9600;bitsperchar=7;stopbits=2;parity=even;blocking=off;autocts=off;autorts=off

1.2. Device configuration

For each device a tag named *deviceNameN* (e.g. : PLC1) must be defined, where *N* is the number of device starting from 1. Description of *deviceNameN* tag is used by the driver to read some parameters, as described below:

*commname**address**timeoutMs**deviceType**unitNumber**blockSize*

Please note that parameters *deviceType* and *unitNumber* must be declared for compatibility reason, in order to specify the last parameter *blockSize*. The default value for parameter *blockSize* is 30, so for each block request the response is single-framed.

Examples:

COM0**3**2000

commname = COM0 ; eWon serial port
 address = 3 ; Host Link unit number
 timeoutMS = 2000 ; 2s timeout for serial read

COM1**0**3000**0**0**10

commname = COM0 ; eWon serial port
 address = 0 ; Host Link unit number
 timeoutMS = 3000 ; 3s timeout for serial read
 deviceType = 0 ; (not used)
 unitNumber = 0 ; (not used)
 blockSize = 10 ; Host Link block size

1.3. TAG list (example)

The following is an example of partial CSV configuration file:

<i>CmdName</i>	<i>Address</i>	<i>Description</i>
CIO0100	CIO0100W	CIO0100
CIO0186	CIO0186I	CIO0186
DM0000	DM0000W	DM0000
DM0001	DM0001W	DM0001
DM0002	DM0002I	DM0002
DM0003	DM0003I	DM0003
DM0004	DM0004I	DM0004

The first two fields (*CmdName*, *Address*) are used by the **eWon drivers eXtender**:

- You can edit the *CmdName* field, then use the new customized prefixes for the eWON tag names.
- You can edit the *Address* field, but note that:
 - Only DM and CIO areas are supported.
 - The address within the area must be an integer between 0 and 9999 (leading zeros are ignored).
 - The last character should be W for Unsigned Integer 16 bit or I for Signed Integer 16 bit. If omitted, W will be used.
- You can edit the *Description* field as you wish.

Please note that defining eWON tags you must respect the following rules:

- Given an Host Link device, the postfix of the eWON tag name must be equal to the *CmdName* field of the CSV configuration file.

To ensure that the **eWON drivers eXtender** reads the values correctly, define the tags in the following way:
deviceNameN_tagPostfix (e.g.: PLC1_DM0003)

1.4. How to create var_lst.csv

If you want use a var_lst.csv file to add the tag to the eWON, create the file as follows:

Name	Description	ServerName	TopicName	Address	Type	PageId
COM0	OmronHostLinkPort**Serial**comm:com:1; baudrate=9600;bitsperchar=7;stopbits=2; parity=even;blocking=off;autocts=off;autorts=off	MEM		COM0	2	2
PLC1	COM0**1	MEM		PLC1	2	2
PLC1_CIO0100	PLC1 - CIO0100	MEM		PLC1_CIO0100	0	1
PLC1_CIO0186	PLC1 - CIO0186	MEM		PLC1_CIO0186	0	1
PLC1_DM0000	PLC1 - DM0000	MEM		PLC1_DM0000	0	1
PLC1_DM0001	PLC1 - DM0001	MEM		PLC1_DM0001	0	1
PLC1_DM0002	PLC1 - DM0002	MEM		PLC1_DM0002	0	1
PLC1_DM0003	PLC1 - DM0003	MEM		PLC1_DM0003	0	1
PLC1_DM0004	PLC1 - DM0004	MEM		PLC1_DM0004	0	1

- The field *Name* in var_lst.csv must be composed of *deviceNameN* (e.g. PLC1) and field *CmdName* (e.g. DM0001).
- The field *Address* in var_lst.csv must be equal to field *Name*.
- The field *ServerName* in var_lst.csv must be *MEM*.
- The field *Description* in var_lst.csv, except for the configuration tags (e.g. COM0, PLC1), has no constraints. It is recommended to fill it with the tag description and other useful informations.
- The field *Type* in var_lst.csv is the data type. Use the following mapping to insert a type (it may depend on the eWON firmware version):

Data Format	eWON Format
0	Boolean
1	Float
2	Integer
3	Dword

1.5. Tested Devices

- Omron CJ1M
- Omron CP1H
- Omron CQM1H

RS232 Cable Wiring Diagram	
DB9 Female	DB9 Male
2 Rx	2 Tx
3 Tx	3 Rx
5 Gnd	9 Gnd