

# OMRON HostLink Master Communication Driver

This document has the specific information related to the driver configuration. For a generic explanation on Devices, Channels, Nodes and Points configuration, please refer to reference guide.

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## Section 1 – Summary Information

**Communication Driver Name:** OmronHostLink

**Implementation DLL:** T.ProtocolDriver.OmronHostLink.dll

**Protocol:** Host Link Interface protocol

**Interface:** Serial

**Description:** Omron Host Link implements communication CPU Units that are compatibles with C-mode commands via Host Link. The communications blocks are dynamically created according the pooling cycle defined on the Access Type for each Device Point.

**Equipments supported:** CS/CJ/CP-series CPU Unit or NSJ Controller

**Communication block size:** 29 Word Addresses

**Protocol Options:** Block Size, Ignore Non critical error and Change the PC mode for Writings

**PC Hardware requirements:** Standard PC with RS232 port

### Supported Operands:

| Operand                   | Read | Write | Data Type | Address size |
|---------------------------|------|-------|-----------|--------------|
| IR – Internal Relay       | ✓    | ✓     | Word      | 2 bytes      |
| SR – Extended Relay       | ✓    | ✓     | Word      | 1 bit        |
| HR – Holding Bit          | ✓    | ✓     | Word      | 2 bytes      |
| AR - Auxiliary Bit        | ✓    | ✓     | Word      | 2 bytes      |
| DM – Data Memory          | ✓    | ✓     | Word      | 2 bytes      |
| PV – Timers/Counter Value | ✓    | ✓     | BCD       | 2 bytes      |
| TC – Timer/Counter Status | ✓    | ✓     | BCD       | 2 bytes      |

**Table 1**

## Section 2 – Channel Configuration

### Protocol Options

**Max Block Size:** Determines the maximum block size. Default: 29 Word Addresses

**Ignore Non Critical Error:** Indicates the driver behavior when the PLC returns the 64 status that is a non fatal error:

- **True:** returns Success, with error code = 64 and set the tag quality to GOOD
- **False:** returns Failed, with error code = 64 and set the tag quality to BAD

**Change the PC mode for Writings:** Indicates whether the communication driver should send a command that changes the PLC state to MONITOR in order to perform writing operations, otherwise the writing will fail (error code 1). Default = True

### Settings - Serial channels:

- Default RS-232 serial port configuration.

## Section 3 – Node Configuration

### Station Configuration - Serial (RS232) Channels

Syntax: <Device id>

Where Device id is the PLC address

### Station Configuration - Multi Serial channels:

Syntax: <Port > ; <Device id>

Where : < Port > = COM port for communication (default is COM1)

Ex: COM1 ; 0

## Section 4 – Point Configuration

The syntax for the communication points is: <Memory Area> : <Address>

The Valid Memory areas are:

IR Internal Relay Bit Area  
HR Holding Relay Bit Area

AR Auxiliary Relay Bit Area  
LR Link Relay Area  
DM Data Memory Area  
PV Timer/Counter Present Value Area  
TC Timer/Counter Status Area

Ex:

|        |                                  |              |
|--------|----------------------------------|--------------|
| CA:0   | Memory Area = CA,                | Address = 0  |
| CIO:20 | Memory Area = CIO,               | Address = 20 |
| EM0:1  | Memory Area = Extended Memory 0, | Address = 1  |
| EM6:1  | Memory Area = Extended Memory 6, | Address = 1  |

## Section 5 – Troubleshoot

The driver execution status can be observed through the diagnostic tools that are:

- Trace window
- Property Watch
- Module Information

The above tools indicate if the operations have succeeded or have failed where the status 0 (zero) means success. Negative values are internal error codes and positive values are protocol error codes.

| PLC Error Code | Description                               |
|----------------|---|
| 1              | Not executable in RUN mode                |
| 2              | Not executable in MONITOR mode            |
| 4              | Address over (CPM1 PLCs)                  |
| 5              | Invalid Header                            |
| 6              | Invalid Address                           |
| 7              | Invalid block size                        |
| 11             | Not executable in PROGRAM mode            |
| 19             | FCS error                                 |
| 20             | Format error                              |
| 21             | Entry number data error                   |
| 22             | Command not supported                     |
| 24             | Frame length error                        |
| 25             | Not executable                            |
| 35             | User memory write-protected               |
| 163            | Aborted due to FCS error in transmit data |

## Revision History

| Revision | Description      | Date      |
|----------|------------------|-----------|
| A        | Initial Revision | June 2012 |