Application Note-001

CIE-H10 Internet Switch

Version 1.1

☞ *Caution: Specifications of this document may be changed without prior notice for improvement*
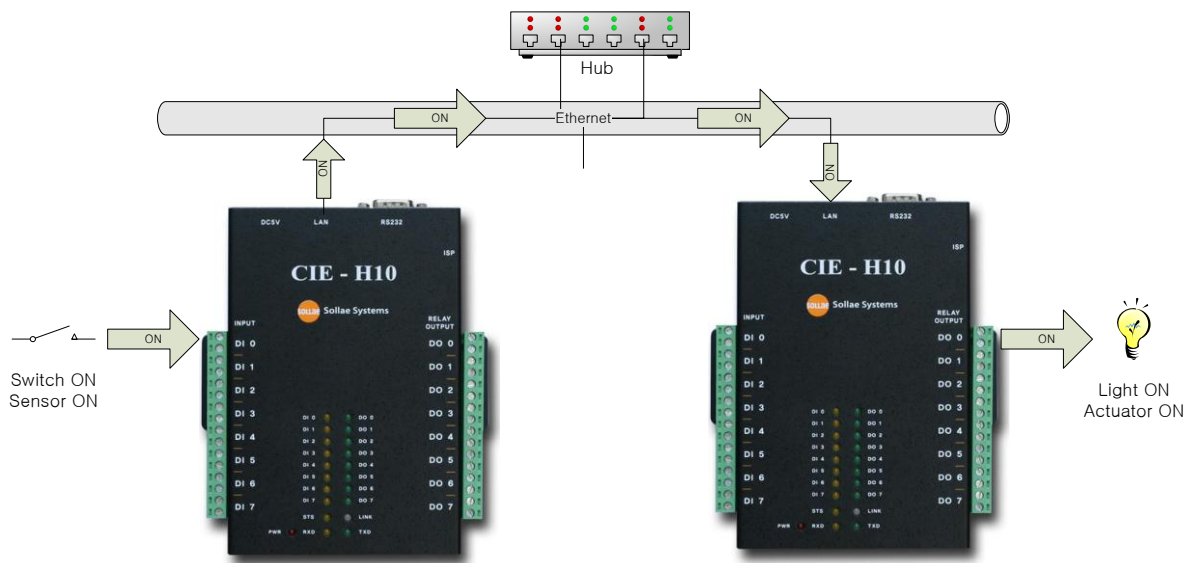
Sollae Systems Co., Ltd.

Contents

1 Operation Concept

CIE-H10 is a device that monitors and controls the 8 digital input and output ports with TCP/IP. Each port is monitored and controlled by Modbus/TCP and HTTP. In addition, it outputs port information to the output ports after calculating the pre-defined algebraic equations according to input ports' values.

You can make a system that transfers input information through the TCP/IP network and outputs the value. This function is called as "Internet Switch".

You can turn on or off the devices remotely through Ethernet or Internet with two CIE-H10s.

☞ *Officially, CIE-H10 provides only DC for input and output power source.*

☞ *Please refer to the manual for interfacing to the user device.*

2 Configuration

2.1 Configuring IP Address related parameters

Input IP address related parameters (Local IP Address, Subnet Mask, Gateway, etc) in the [NETWORK] tab of the ezManager. User has to ask to the network administrator for IP address related parameters.

Refer to the manual of CIE-H10 for the [NETWORK] tab information.

2.2 Configuring TCP connection related parameters

2.2.1 Configuration

To do a Modbus/TCP communication, a TCP connection should be established between two CIE-H10s. The TCP connection is 1 to 1 connection. A server should listen from a port (Passive connection) and a client should make a TCP connection to the server's port (Active connection), then the connection will be established.

You can set the TCP connection information for Modbus/TCP in the [Active/Passive Connection] field in the [I/O INTERFACE]-[Option] tab of the ezManager.

2.2.2 Example

The following example is that the (B) device tries to make a TCP connection to the (A) device (port number: 502) for Modbus/TCP communication.

Device	CIE-H10#1	CIE-H10#2
Local IP Address	10.1.0.1	10.1.0.2
Active/Passive	Passive	Active
Peer Address	-	10.1.0.1
Port	502	502

Table 2-1 example

2.3 Configuring Modbus/TCP related parameters

2.3.1 Configuration

You can set the Modbus/TCP related information in the [Basic Settings] in the [I/O Port]tab of the ezManager.

Field	Description
Modbus/TCP	Modbus/TCP enable field. (should be set)
Mater/Slave	Master – A master transmits its input information to the salve and outputs the slave's input value to its output port after reading the value periodically. Slave – If a salve gets a [Read] command from the master, it sends its input port's value to the master and if the slave gets [Write] command from the master, it outputs the value to its output port.
Poll Interval	The period that the master is polling for [Read] and [Write] operations. Recommended value: 1000 (1 second)
Unit ID	The unit ID two devices Recommended value: 1
Input Port Address	The input port addresses of the two devices Recommended value: 0
Output Port Address	The output port addresses of the two devices Recommended value: 8
Input Change Notification	Do not set.

Table 2-2 variables of Modbus/TCP

2.3.2 Example

Device	CIE-H10 (A)	CIE-H10 (B)
Modbus/TCP	Check	Check
Master/Slave	Slave	Master
Poll Interval		1000
Unit ID	1	1
Input Port Address	0	0
Output Port Address	8	8

Table 2-3 example

3 Revision History

Date	Version	Comments	Author
2008.08.13	1.0	○ Initial release	
2013.02.12	1.1	○ Update terms ○ Remove descriptions about AC power control	Roy LEE