

ezTCP Technical Document

Upload Users' Homepage

Version 1.3

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1 Overall

I/O Port of CIE-H10/M10/H12/H14 can be monitored and controlled by Modbus/TCP, HTTP and Macro function. Especially, HTTP is the most familiar way for user using WEB browser like internet explorer. CIE-H10/M10/H12/H14 have a default homepage since it is produced by us. Uploading Users' Homepage function had been added so that users can make their own homepages and use not the default homepage but the self-made one. This function had been added boot 1.6 and firmware 1.3A or higher versions.

Although you have a CIE-H10 with 1.3A or a higher version of firmware, if you can't use this function, you should upgrade its boot. Please refer to the technical document on the [Download] >> [Technical Document] menu in our web site for more information about that.

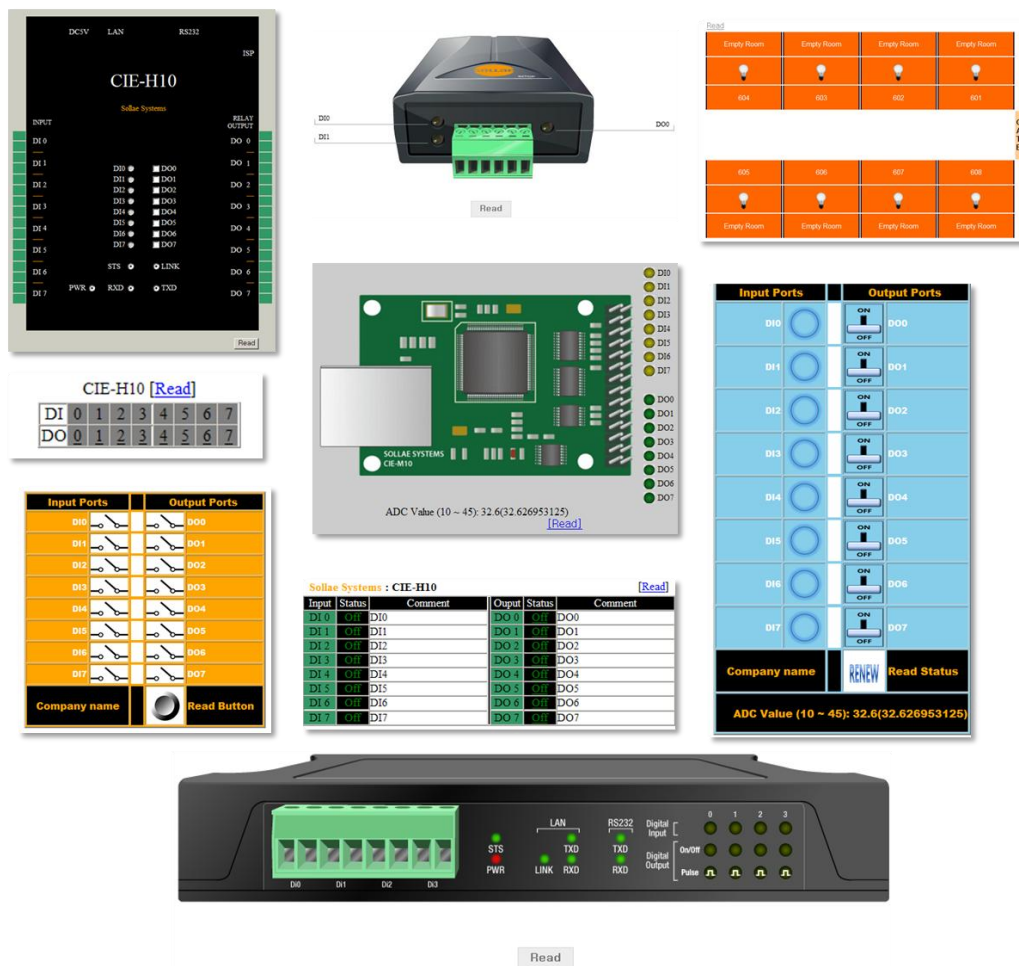


Figure 1-1 examples of sample homepages

2 Making Homepage

2.1 Variables

Follow variables are used.

Division	Name	Description
Input	\$i0 ~ \$i7	Input ports # 0 ~ 7
	\$ci0 ~ \$ci7	Comments of input ports # 0 ~ 7
Output	\$o0 ~ \$o7	Output ports # 0 ~ 7
	\$co0 ~ \$co7	Comments of output ports # 0 ~ 7
ADC	\$a0	An Analog port # 0(In the future)

Table 2-1 used variables

2.2 Usage of Functions

To control I/O port through the HTTP on homepage, you should know the way of using script functions. All the script started with "<?" and ended with "?>". Each function has to be separated with ";" (semicolon).

Name	Description
io_echo(A)	Print A
io_echo_equ(A, B, "a", "b")	If A = B, print a, or else print b
io_echo_grt(A, B, "a", "b")	If A > B, print a, or else print b
io_echo_gre(A, B, "a", "b")	If A ≥ B, print a, or else print b
io_echo_lot(A, B, "a", "b")	If A < B, print a, or else print b
io_echo_loe(A, B, "a", "b")	If A ≤ B, print a, or else print b

Table 2-2 available functions

2.2.1 io_echo(var);

This means print a value of "var". An example of using this function is following.

```
<? io_echo($ci0); ?>
```

In the above example, "\$ci0" means the comment of first input port. The command link is presented as printing the comment of first input port. In case of configuring the first input port to "inout_1", it displayed like the below figure.

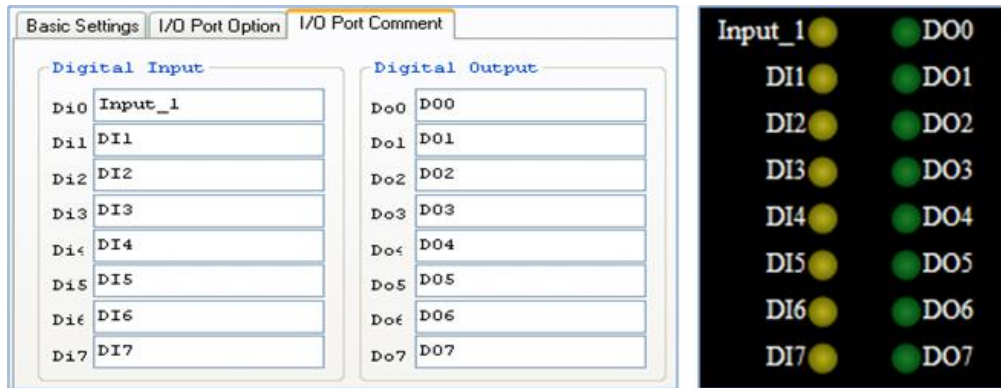


Figure 2-1 Comment of di0 (left) on ezManager and the result on web page (right)

2.2.2 io_echo_equ(var1, var2, "string1", "string2");

This function means that if the value of "Var1" is the same with "Var2", print the "string1", or else print the "string2." An example of usage is followed.

```
<? io_echo_equ($i0, 0, "<img src=h10_y_off.gif border=0>", "<img src=h10_y_on.gif border=0>"); ?>
```

"\$i0" presents the first input port "di0" which is named at "Input_1." This example carries out that if the value of Input_1 is 0, shows the image file which name is "h10_y_off.gif", or else shows the image file which name is "h10_y_on.gif". In the below figure, the first one shows the status that LED of Input_1 is off and second one is on.

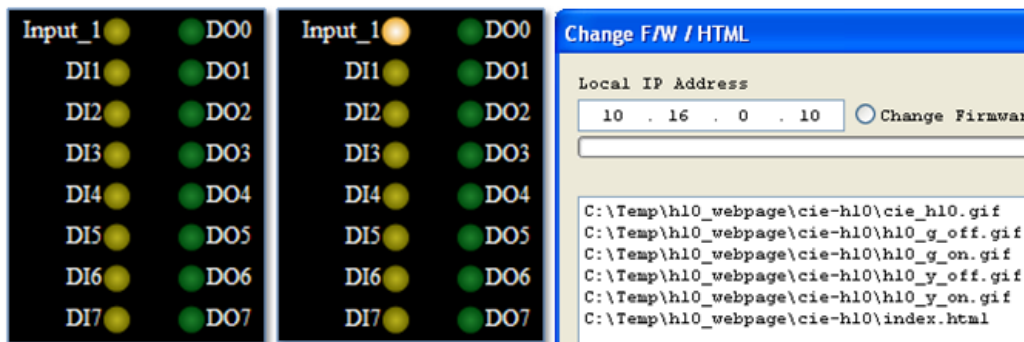


Figure 2-2 result of Input_1 on web site (left) and uploading HTML files (right)

Linked image files have to be included on the list of transferred HTTP files. Look at the right image of the above figure. When you down load HTTP files to CIE-H10/M10/H12/H14, you should check all the files that linked with your HTTP file because only those files which are stored in CIE-H10/M10/H12/H14 can be used.

2.2.3 io_echo_grt(var1, var2, "string1", "string2");

This function means that if value of "var1" is larger than "var2", prints "string1", or else shows "string2"

2.2.4 io_echo_gre(var1, var2, "string1", "string2");

This function means that if values of "var1" and "var2" are same or the value of "var1" is larger than "var2", prints "string1", or else shows "string2"

2.2.5 io_echo_lot(var1, var2, "string1", "string2");

This function means that if value of "var1" is smaller than "var2", prints "string1", or else shows "string2"

2.2.6 io_echo_loe(var1, var2, "string1", "string2");

This function means that if values of "var1" and "var2" are same or the value of "var1" is smaller than "var2", prints "string1", or else shows "string2"

2.3 Example

2.3.1 Digital I/O

- A source code of a sample homepage

No	HTML source
0.	... omitted ...
1.	<table background="cie_h10.gif" border=0 cellpadding=0 cellspacing=0 width=494 height=630>
L>	Define a table.
2.	<tr valign=top>
3.	<td align=left colspan=5 height=370></td>
4.	</tr>
5.	<tr height=16>
6.	<td width=88></td>
7.	<td width=120 class="B" align=right><? io_echo(\$ci0); ?></td>
L>	Print the comment of input port 0.
8.	<td width=13><? io_echo_equ(\$i0, 0, "", ""); ?></td>
L>	If input port 0 is low, print off image, or else print on image.
9.	<td width=24></td>
10.	<td width=13><? io_echo_equ(\$o0, 0, "", ""); ?></td>

L>	If output port 0 is low, print off image, or else print on image.
11.	<td width=140 class="B" align=left><? io_echo(\$co0); ?></td>
L>	Print the comment of output port 0.
12.	<td width=96></td>
13.	</tr>
14.	<tr height=6>
15.	<td colspan=5></td>
16.	</tr>
17.	<tr height=16>
18.	<td width=88></td>
19.	<td width=120 class="B" align=right><? io_echo(\$ci1); ?></td>
L>	Print the comment of input port 1.
20.	<td width=13><? io_echo_equ(\$i1, 0, "", ""); ?></td>
L>	If the input port 1 is low, print off image, or else print on image.
21.	<td width=24></td>
22.	<td width=13><? io_echo_equ(\$o1, 0, "", ""); ?></td>
L>	If the output port 1 is low, print off image, or else print on image.
23.	<td width=13><? io_echo_equ(\$o1, 0, "", ""); ?></td>
L>	Control pulse of output port 1. (interval : 1s)
24.	<td width=140 class="B" align=left><? io_echo(\$co1); ?></td>
L>	Print the comment of output port 1.
25.	<td width=96></td>
26.	</tr>
27.	... omitted ...

Table 2-3 a source code for controlling digital I/O

- Test

Following figures are show states that you click the output port 1, 3, 7 in orderly manner using the above source code.

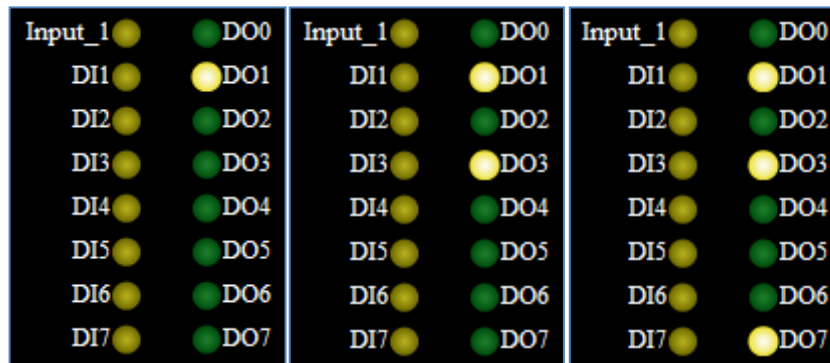


Figure 2-3 Clicking the image No.1, 3, 7 in sequence

- Used files in the example

Name	Type of file	Descript
Default_image	-	Folder
cie_h10.gif	Image	An image of CIE-H10's body
h10_g_off.gif	Image	An image that the green LED is off
h10_g_on.gif	Image	An image that the green LED is on
h10_y_off.gif	Image	An image that the yellow LED is off
h10_y_on.gif	Image	An image that the yellow LED is on
index.html	HTML	Main of web page

Table 2-4 A list of used files in the example

☞ All the sample codes for the users' homepage are on the CIE-H10/M10/H12/H14's pages in our web site including the above code.

2.3.2 Analog Input

No	HTML source
0.	... omitted ...
1.	<table border=0 cellpadding=0 cellspacing=0 width=700>
L>	Define a table
2.	<tr valign=top><td align=left valign=middle width=450></td><td width=10></td>
3.	... omitted ...
4.	<tr align="center"><td class="C"> ADC Value (10 ~ 45): <script type="text/javascript">document.write(Math.round(<?io_echo(\$a0);?> * 350 / 1024 + 100) / 10);</script><script type="text/javascript">document.write(<?io_echo(\$a0);?> * 35 / 1024 + 10);</script></td></tr></table>
L>	Print the value of analog input as a range between 10 and 45
5.	[Read]
6.	... omitted ...

Table 2-5 a source code for monitoring the analog input

● Test

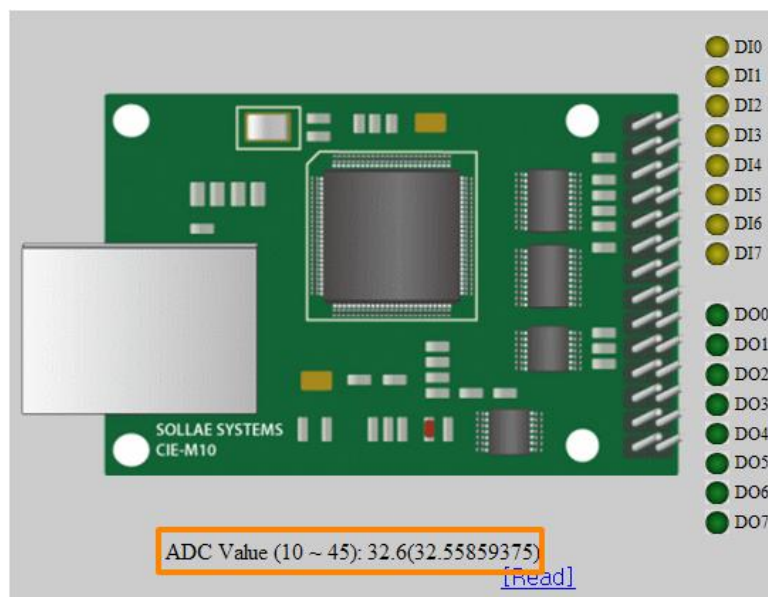


Figure 2-4 ADC value

☞ *The value of CIE-M10's ADC port is presented with 10 bits(0~1023) resolution*

- Used files in the example

Name	Type of file	Descript
Default_image	-	Folder
cie_m10.gif	Image	An image of CIE-M10's body
m10_g_off.gif	Image	An image that the green LED is off
m10_g_on.gif	Image	An image that the green LED is on
m10_y_off.gif	Image	An image that the yellow LED is off
m10_y_on.gif	Image	An image that the yellow LED is on
index.html	HTML	Main of web page

Table 2-6 A list of used files in the example

3 Uploading Homepages

3.1 Processes

- Making Users' homepage or Downloading sample files
Make your own homepage file or use a sample homepage files which we've been offering on our web site.
- Entering ISP mode
Enter ISP mode to send HTML files.

Products	Entering method
CIE-H10 CIE-H12 CIE-H14	Pressing the ISP button over 1 second, or supplying the power with pressing the button
CIE-M10	Supplying the power when the status of ISP(-) pin is LOW, or Giving LOW to the pin over 1second

Table 3-1 entering the ISP mode

- Running a TFTP client and ready to send the HTML files
Run a TFTP client program. ezManager is equipped the client program. Click the [Change F/W / HTML] button.

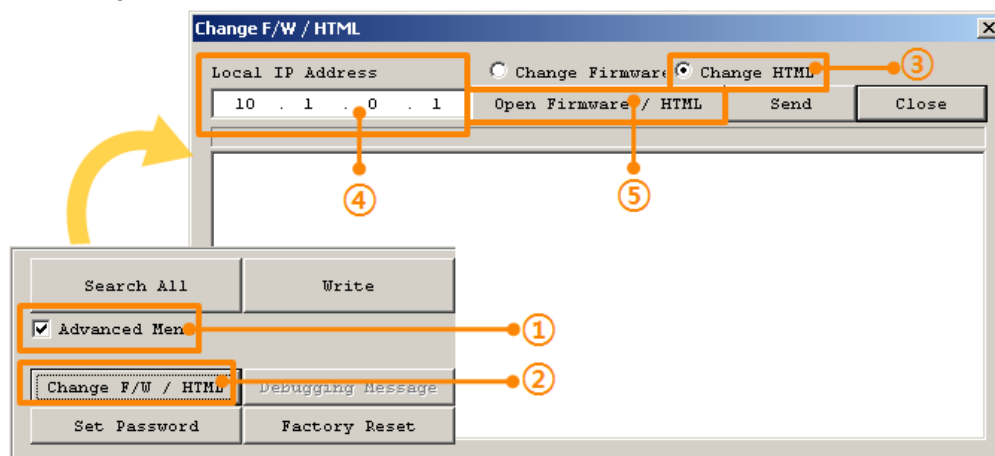


Figure 3-1 running TFTP client

- ① Check the [Advanced Menu] check box
- ② Click the [Change F/W / HTML] button to run TFTP client
- ③ Select the [Change HTML] radio button
- ④ Input the IP address of CIE-H10 to the [Local IP Address] text box
- ⑤ Press the [Open Firmware / HTML] button and choose the HTML file

● Checking firmware file and Sending

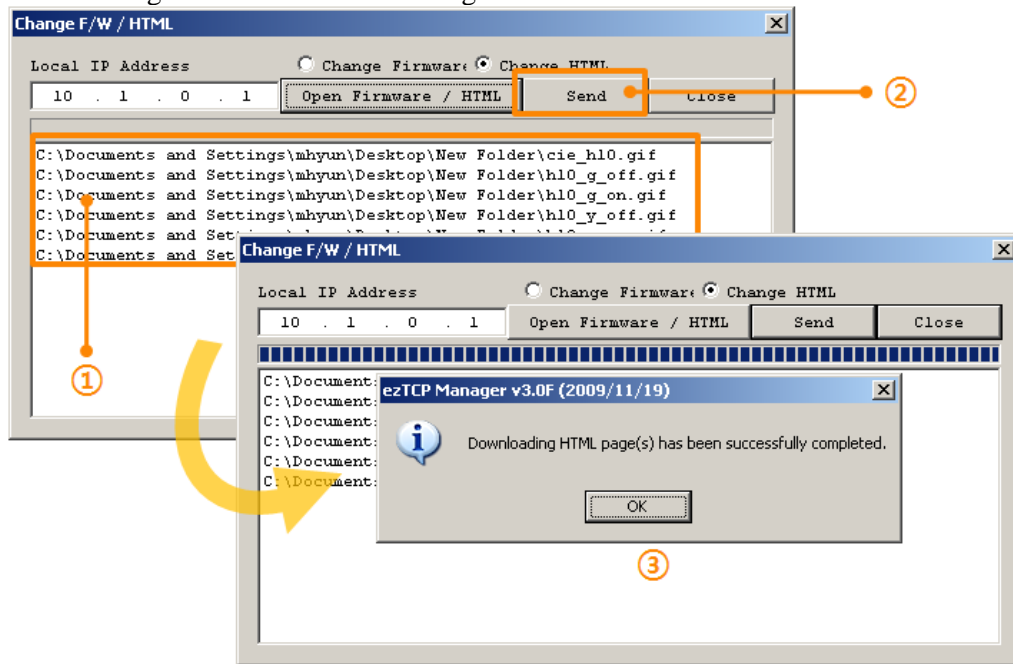


Figure 3-2 sending firmware file

- ① Check if the name and path of the HTML files are correct
- ② Click the [Send] button
- ③ Confirm the completed message

4 Revision History

Date	Version	Comment	Author
2009.03.31	1.0	○ Initial Release	
2009.04.29	1.1	○ Correct some expressions and the version of firmware ○ Modify some figures	
2009.12.08	1.2	○ Description of upgrading boot has been removed. ○ The form of document has been changed. ○ The form of Revision History has been modified. ○ Description of uploading homepage has been modified. ○ Description of Examples has been modified. ○ Contents of CIE-M10 has been added. ○ Description of entering ISP mode has been added.	Roy Lee
2014.02.17	1.3	○ Contents of CIE-H12/H14 has been added. ○ Images of sample page has been changed	Amy Kim