

## **MPE720 improvement item and bug fix change**

### **1. Function addition and improvement item**

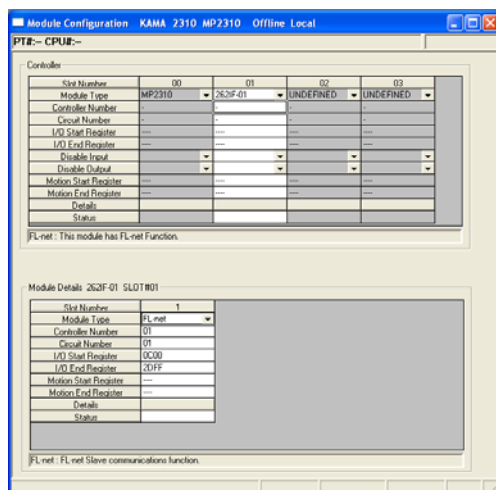
Items added and features improved from MPE720 version 5.39A to version 5.40A are as follows.

No.	Function item	Classification
1	Support to 262IF-01 module	Function addition
2	Support to LIO-06 module	Function addition
3	For Windows Vista	Function addition
4	Add the index function of motion program	Function addition
5	Add the "default" divergence of SFORK instruction	Function addition
6	The size of the combo list to select the motion command is changed	Function addition
7	Update of version of driver of MP2100	Function addition
8	Trouble of option input of the MLNK-SVW function	Preventive
9	Trouble of display of group folder name	Preventive
10	Trouble of operation that save detailed definition of CNTR-01 module	Preventive
11	In the motion program, trouble of input of hexadecimal number	Preventive
12	Trouble not to be able to start MPE720 by using [Google Desk Top]	Preventive
13	In the conditional expression, the trouble of the block number when ON/OFF is used	Preventive
14	Width enhancing of grid of motion error list	Preventive
15	Trouble of print	Preventive
16	Trouble when CFUNC instruction is saved	Preventive
17	Trouble of jump of Application converter	Preventive
18	The print is defective when there is space in the comment	Bug fix
19	Trouble of the ladder convert	Bug fix
20	Trouble when double-byte hyphen is compiled	Bug fix

## 2. Correction content explanation

### No.1 Support to 262IF-01 module

It supported to the 262IF-01 module that was the new option module.



262IF-01 is a communication interface to connect the MP series Machine Controller with FL-net (OPCN-2).

262IF-01 can be communicated with MP series Machine Controller connected with FL-net (OPCN-2), other brands of controller, personal computer, and etc.

#### < FL-net Specification >

No.	Item	Specification	
1	Signal Transmission Speed	100Mbps/ 10Mbps	Ethernet compliance
2	Topology	bus	
3	Length of transmission line (Length which use repeater.)	- 100m (300m) Max:100BASE-TX - 100m (500m) Max: 10BASE-T	
4	Number of node	254 Max (use repeater)	
5	Media access control	- Token path - Token re-create of each node - On in-ring/ out-ring of each node	
6	Communications Function	- Cyclic transmission (broadcast communications) - Message transmission 1:1 Opposed communications 1:N Multicast communication	
7	Equipment Interface	- Common memory 8k bit + 8k word (word: 16 bit) - Message Service Read byte block, write byte block, and others (All of the 13 types).	

### < FL-net Performance >

No.	Item	Specification
1	Token Holding Time	Within 1.56 ms
2	Cyclic Transmission Cycle	Within 3.75 ms (Condition: 2node, amount of data 64 bit + 64 word)
3	Message Response Time	Within 500 ms (Condition: While No.2 cyclic transmission cycle.)

### < FL-net System Performance >

No.	Item	Specification
1	Cyclic Transmission Cycle	Within 50ms (Condition: 32 node, amount of data 2k bit + 2k word)

\*: MP2000 Series controller needs system software version 2.63 or later, when this function will use.

### < Specification of MSG-SND/ MSG-RCV >

When the MSG-SND/ MSG-RCV function is used for FL-net in the ladder program, it becomes the following set.

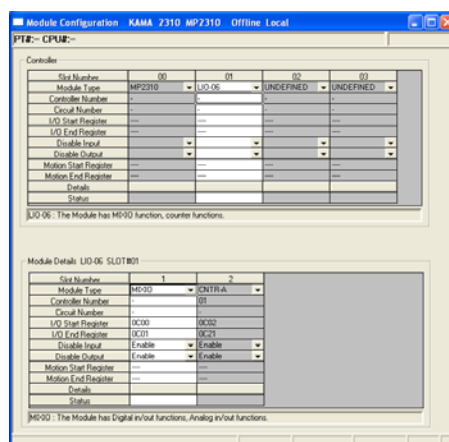
#### [ Parameter Specification ]

- Dev-Typ = 14 (FL-net)
- Enabled Function Code (PARAM04)

09H	Read holding register contents (extended)
0BH	Write to holding register (extended)

## No.2 Support to LIO-06 module

It supported to the LIO-06 module that was the new option module.



The LIO-06 module has digital input/output function, the analog input/output function, and the pulse counter function.

This module equips with the digital input (DI) 8 point and the digital output (DO) 8 point (Sync output) as digital input/output function.

This module equips with the analog input (AI) 1 channel and the analog output (AO) 1 channel as an analog input function.

This module equips with the pulse input (PI) 1 channel as a pulse counter function.

It is input/ output at each high-speed (High)/ low-speed (Low) scanning of the MP series Machine Controller.

< LIO-06 Specification >

Function Module Name	Function Description	I/O Register Size
MIXIO	- Digital input: 8 point (Combine with Interruption 1 point DI_00.) (Combine with DI Latch 1 point DI_01.) - Digital output: 8 point (Combine with Coincident detection 1 point DI_07.) - Analog input: 1 channel - Analog output: 1 channel	Input register 2 word  Output register 2 word
CNTR	Pulse input: 1 channel	Input register 32 word  Output register 32 word

\*: MP2000 Series controller needs system software version 2.63 or later, when this function will use.

### No.3 For Windows Vista

In the Windows Vista environment, an installation and other function corresponded normally to operate.

< Supported Edition >

Support to all edition of Windows Vista.

Supported Edition
Home Basic edition
Home Premium edition
Business edition
Ultimate edition

< Supported Version >

Product	Supported Version
MPE720 Ver.5	Version 5.40A
Communication Manager	Version 3.76
Electronic Cam Data Tool	Version 4.59
CimScope	Version 0.69
New Ladder Editor	Version 2.76
MP2100 driver	Version 1.4.0.0
MP2200-02 USB driver	Version 1.0.0.4

## No.4 Add the index function of motion program

The index (i and j) can be used in the motion program as well as the ladder program.

### < Target Program >

As for the index (i and j) can be used in the all motion programs and sequence programs.

Program Kind	Use
Motion main program	Use
Motion sub program	Use
Sequence main program	Use
Sequence sub program	Use

### < Index Specification >

	Description	
Index	i, j (Capital letter or small letter can be used)	Ex) MW00000i MB010000j DW00001I
Target Register Kind	S/ I/ O/ M/ D/ C/ A	
Target Register Type	LONG/ FLOAT/ WORD/ BIT	
Description of Operation	Accesses MW00002 when MW00000i ----> i =2.	
	Accesses ML00002 when ML00000i ----> i =2.	
	Accesses MF00002 when MF00000i ----> i =2.	
	Accesses MB000002 when MB000000i ----> i =2.	
	The value set to specified register address in i is added, and accesses the register address when except BIT type. Accessing the BIT number to which the value set to the specified BIT number in i is added when BIT type..	

### < Saple of index (i and j) >

PT#:-- CPU#:--	
GROUP1	
00001 00000	i=0;
00002 00001	while ib000000=0;
00003 00002	i=i+1;
00004 00003	MW00100i = i;
00005 00004	wend;
00006 00005	end;
00007	

\*: MP2000 Series controller needs system software version 2.63 or later, when this function will use.

## No.5 Add the "default" divergence of SFORK instruction

The "default" branch is added to the SFORK instruction. And, it jumps to this "default" branch if conditions are the unapproval of all when there is a "default" branch in the SFORK instruction.

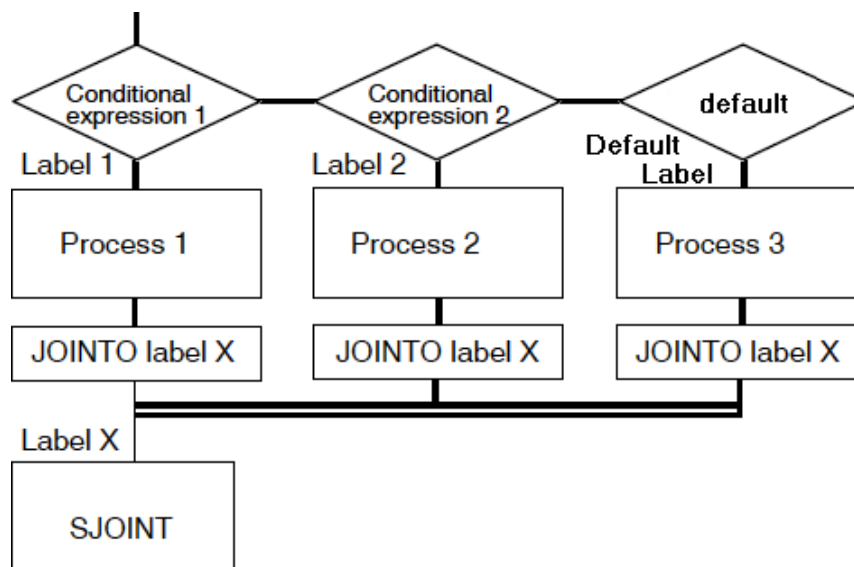
### < Target Program >

As for the "default" branch of the SFORK instruction can be used in the all motion programs and sequence programs.

Program Kind	Use	"default" Branch
Motion main program	Use	Option
Motion sub program	Use	Option
Sequence main program	Use	Must
Sequence sub program	Use	Must

### < Usage of "default" >

```
SFORK Condition1?Label1ConditionalExpression2?Label2default?DefaultLabel;  
Label1: Process1;  
        JOINTO LabelX;  
Label2: Process2;  
        JOINTO LabelX;  
DefaultLabel: Process3;  
        JOINTO LabelX;  
LabelX:SJOINT;
```



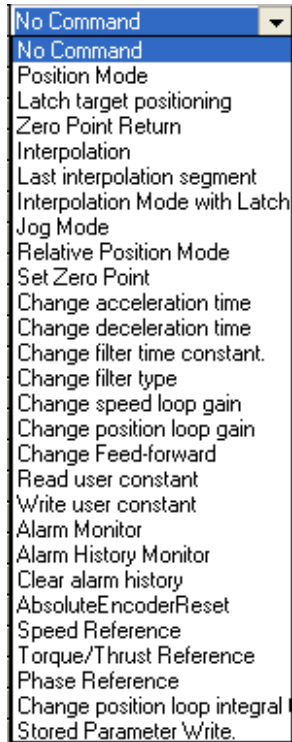
\* There is the following conditions when "default" branch is used.

- The "default" branch can be used at the end of the SFORK syntax.
- As for the branch target in the SFORK syntax, 16 branches can be used including "default" branch.
- A branch can be used in one SFORK syntax.
- The "default" branch distinguishes neither the capital letter nor the small letter. Therefore, "Default", "DEFAULT" and " default" are judged as the same branch.

\*: MP2000 Series controller needs system software version 2.63 or later, when this function will use.

## No.6 The size of the combo list to select the motion command is changed

The size of the combo list to select the motion command of the motion parameter is changed.  
And, the display area of the command list that can be displayed once is expanded.



## No.7 Update of version of driver of MP2100

The version of the driver of the MP2100 was updated to Ver.1.4.0.0.

## No.8 Trouble of option input of the MLNK-SVW function

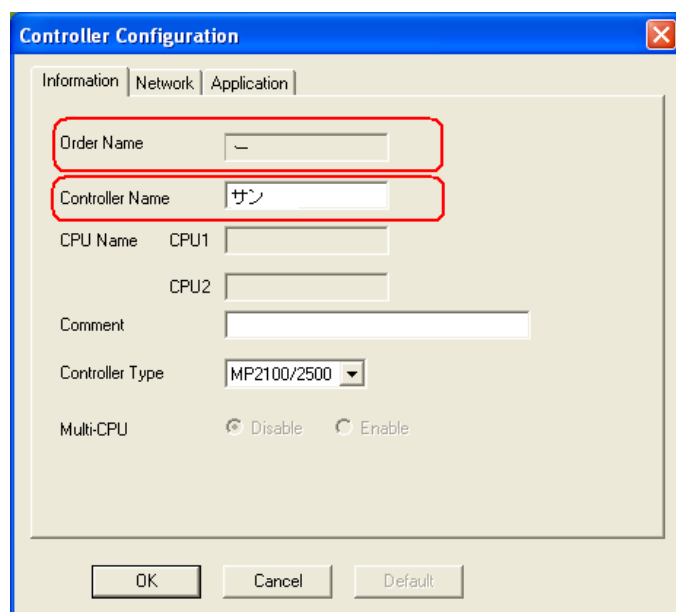
When the MLNK-SVW function was used with the new ladder program, the value of H7FFF or more was not able to be set to the option field.

It was corrected that the value between from the minimum value of word type to the maximum value (-32768 to 32767) was able to be input.

## No.9 Trouble of display of group folder name

The order folder name is made from a specific double-byte character.

Then, the display of the PLC order name displayed in the dialog of PLC information lacked part and was displayed. Therefore, this was corrected.



## No.10 Trouble of operation that save detailed definition of CNTR-01 module

Because the preservation confirmation message had not been displayed though it moved to "I/O data setting" screen without changing an arbitrary set value with the spin button of "Fixed parameter setting" screen on the detailed definition screen of the CNTR-01 module, and doing the preservation operation, this was corrected.

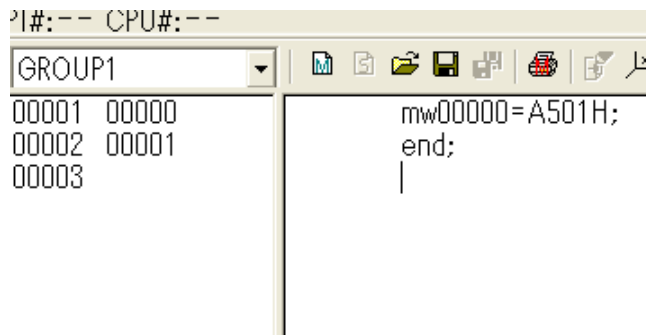


### No.11 In the motion program, trouble of input of hexadecimal number

In the motion main program, the program like the example is made.

Then, it becomes a "Syntax Error".

Therefore, this was corrected.



### No.12 Trouble not to be able to start MPE720 by using Google Desktop

When the clock of the sidebar was displayed by using the Google Desktop, the MPE720 was not able to be started.

Therefore, this was corrected.

### No.13 In the conditional expression, the trouble of the block number when ON/OFF is used

ON/OFF is described in the conditional expression of the motion program.

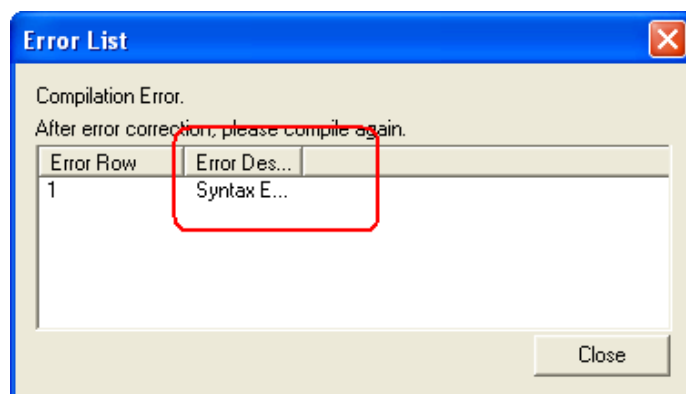
Then, the block of an invalid empty column was made.

Therefore, this was corrected.

### No.14 Width enhancing of grid of motion error list

The content of the error displayed in the dialog of the motion error list has not been clearly at one view.

Therefore, correct width in the grid was expanded, so error at one view clearly.



### No.15 Trouble of print

The range of the automatic reception register of the serial definition was not correctly printed. And, the unnecessary DHCP setting of 218IFA / IFB was printed.

Therefore, this was corrected.

### No.16 Trouble when CFUNC instruction is saved

In CFUNC instruction, the compilation went though a different register type was set to the address input column.

Therefore, this was corrected.

### No.17 Trouble of jump of Application converter

When the motion parameter of the SVB is converted, the parameter log displayed in the error log is double-clicked in the Application converter.

However, it did not jump to the corresponding place.

Therefore, this was corrected.

### No.18 The print is defective when there is space in the comment

When the comment started the register comment of the new ladder program with space, the comment since space was not printed in the result of the crossing print.

Therefore, this was corrected.

\* When the comment is made 「aa bb cc」 and 「dd ee」 and it prints

	Symbol	Symbol comment
ead, Main		aa bb cc
Write, Main		dd ee

## No.19 Trouble of the ladder convert

The CP ladder that registers MFxxxxx and DFyyyyy (xxxxx、yyyyy : address) as a symbol is converted into the new ladder.

Then, the address after it had converted it was all 00000.

Therefore, this was corrected.

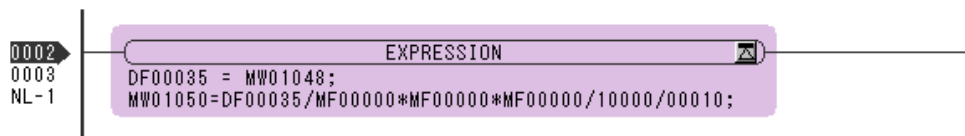
Before convert

```
1 0014  IF-MW01048  ÷MF02020          ×MF02022
1 0017  ×MF02000          ÷ 10000  ÷ 00010          ⇒MW01050
```



convert

After convert



## No.20 Trouble when double-byte long vowel character is compiled

The error of 「No end command」 occurred when the double-byte long vowel character was preserved by the motion program as not the comment but a code.

After the error had occurred, it was not possible to save it by becoming an error until the Engineering manager was shut.

Therefore, this was corrected.