# **Upgrade Information of MPE720 Version5.60**

## 1. Added and Improved Functions

Items added and features improved from MPE720 version 5.56 to version 5.60 are as follows.

No.	Feature	Classification
1	Supports Windows7	Add function
2	Supports TOYOPUC protocol	Add function
3	Supports 1000 series inverter	Add function
4	Improvement of backlash compensation amount of SGDV	Improvement
5	Improvement of transfer of C register of Application converter	Improvement
6	Improvement of linear motor of wildcard servo	Improvement
7	Improvement of CFUNC instruction of motion program	Improvement
8	Improvement of register check of 218IFA/218IFC	Improvement
9	Improvement of communication of MPU-01 on Multi Core CPU	Bug fix

### 2. Description

#### No.1 Supports Windows7

Upgraded following functions for Windows7.

Function	Description
Communication	When the computer's power is coming back from sleep, the communication
process	process is not down.
USB Driver	USB driver for MP2200-02 can be recognized by Windows7 OS.

We also make it sure that the functions have no problem on Windows7 by the manual test.

### No.2 Supports TOYOPUC protocol

TOTOPUC protocol was added to 218IF module (except 218IF-01).

Only message communication was supported, not I/O message communication. Data type is BIN only.

$\begin{bmatrix} C \\ C \end{bmatrix}$	Connection Parameter Message Communication												
	Easy setting It is possible to following parameter setting easily that communicate the message.												
		CNO	Local Port	Node IP Address	Node Port	Connect Type		Protocol Type		Code		Detail	<u> </u>
		01	10000	192.168.001.100	10001	TCP (	•	TOYOPUC )	•	BIN	•	Setting	
		02					ł		•		-	Setting	
		03					•		•		-	Setting	
		04					۲		•		٠	Setting	
		05					•		•		-	Setting	
		06					•				•	Setting	

#### No.3 Supports 1000 series inverter

216/1000 device type is able to selected and saved for 216IF.

 $216/1000\ \text{is}$  displayed as device type on IO map, Status, and Print. Screen.

216IF 2204	MP2200-04 Offline	Local			
PT#:- CPU#:-			RACK#01 Slot #01	CIR#01 0840-0C3F	
Transmission Parameters	Link Assignment 1/0 M	ap Status			
Lexal .			T STREE SCAN	Commont	
01 216/1000	- II III III		1 0120 0LAN	Comment	
02	× 11	-	×		
03	-		*		
04	÷				

PPLC2-962421	P00034	2161Fリンク割付 SLOTNo.	. 01–01	
		( 0000 0055 )		
		( 0800~08FF )		
ST≢	TYPE	D INPUT SIZE	D OUTPUT SIZE	SCAN
01 02 03 04 05 06 07 08 09 09 10 11 12 13	216/1000	TW0800 - 16	OW0810 - 16	

For M-II device type, 1000 series is same as VS-7Series, so it was just only changing device name from VS-7Series to VS-7/1000Series

MECHATROLINK 2204 MP2200-04 Offline Local									
PT#:- CPU#:-			RACK#01 Slot	#01 CIR#02 0840-0C3F					
Transmission Parameters Link Assignment 1/0 Map Status									
				Comment					
0 VS-7/1000Series			High -	Commerk					
02		<u>_</u>	-						
04									
05			-						
06									
08		Ē	-						

No.4 Improvement of transfer of C register of Application converter

When MP940's application data was converted by Application converter of MPE720Ver5, C register was also converted.

But register size is different between MP940 and the converted MP2000 controller. Therefore, if that converted folder was transferred to another media, 'C register packet buffer over' error was occurred.

So Application converter was corrected so that C register is not transferred.

No.5 Improvement of backlash compensation amount of SGDV

Backlash compensation amount of SGDV was disabled on Fixed Parameter screen.

incertainteeve Setup talaitetets SETIVOLACIA Monitor							
No	Name	Input Data	Unit				
0	Selection of operation modes	Normal operation mode 👻					
1	Function selection flag 1	0000 0000 0000 0000	ОООО Н				
2	Function selection flag 2	0000 0000 0000 0000	0000 H				
4	Reference unit selection	pulse 👻					
5	Number of digits below decimal point	3					
6	Travel distance per machine rotation	10000	User units				
8	Servo motor gear ratio	1	revs				
9	Machine gear ratio	1	revs				
10	Infinite length axis reset position(POSMAX)	360000	User units				
12	Positive software limit value	2147483647	User units				
14	Negative software limit value	-2147483648	User units				
16	Backlash compensation amount	0	User units				
30	Encoder selection	Incremental encoder 👻					
34	Rated motor speed	3000	min-1				
36	Number of pulses per motor rotation	65536	pulses/rev				
38	Maximum number of absolute encoder turns rotation	65534	revs				
42	Feedback Speed Movement Averaging time constant	10	ms				

#### N0.6 Improvement of linear motor of wildcard servo

When wildcard servo is attached to M–II/III (SVB, SVC), Linear motor is able to be selected on Motion parameter  $M_{\rm eff}$ 

screen.

SVC Definition 2204 MP2200-04 Offline Local										
PT#:- CPU#:-										
Axis 1     SERVDPACK Wild Card Device     Version     Servo     Servo     PRotary       Fixed Parameters     Setup Parameters     SERVDPACK     Monitor     Linear										
No	Name	Input Data	Unit							
	Selection of operation modes	Normal operation mode 🔻								
1	Function selection flag 1	0000 0000 0000 0000	0000 H							
2	Function selection flag 2	0000 0000 0000 0000	0000 H							
4	Reference unit selection	pulse 👻	•							
5	Number of digits below decimal point	3	•							
6	Travel distance per machine rotation	10000	User units							
8	Servo motor gear ratio	1	revs							
9	Machine gear ratio	1	revs							
10	Infinite length axis reset position(POSMAX)	360000	User units							
12	Positive software limit value	2147483647	User units							
14	Negative software limit value	-2147483648	User units							
30	Encoder selection	Incremental encoder 💌	•							
34	Rated motor speed	3000	min-1							
36	Number of pulses per motor rotation	65536	pulses/rev							
38	Maximum number of absolute encoder turns rotation	65534	revs							
42	Feedback Speed Movement Averaging time constant	10	ms							
44	User Select Servo Driver User Constant Number	0	•							
45	User Select Servo Driver User Constant Size	1	word							

No.7 Improvement of CFUNC instruction of motion program

That was caused by misjudgment of number of address. CFUNS has three address parameters so that the number of address is kept in the compiler. But that number was also used at FUNC/UFC. So the information about number of address is reset.

#### No.8 Improvement of register check of 218IFA/218IFC

The register range check was executed while IO message communication was disabled at 218IFA/218IFC. Therefore the error was occurred when no input/output register was assigned, and IO message communication was disabled.



When IO message communication is disabled, register range check does not work. So there is no error and can save the definition with no register assign.

#### No.9 Improvement of communication of MPU-01 on Multi Core CPU

When MPE720 was connected to MPU-01 by Communication process on PC with multi core CPU, ethernet thread was created for MPU-01 in parallel with the main thread.

Ethernet thread executed the process of IP address check, but there was the global variable in the process. Therefore in case of multi core CPU other thread overwrote the variable, and it caused discommunication with MPU-01.

The variable is exchanged to local so that this bug is not occurred.