

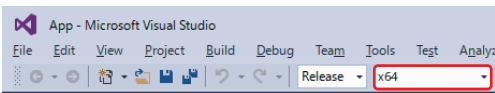
1.2 Configuration of a Development Tool

This section shows the configuration procedure necessary to use the C Controller module dedicated functions via the development tools (development environment for Windows).

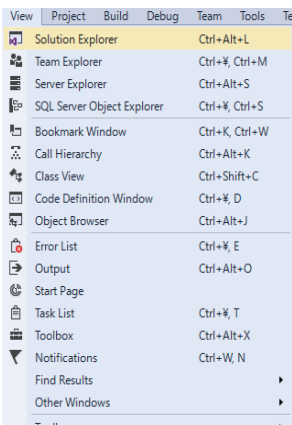
Point

This is configuration procedure uses the screens of Microsoft Visual C++ 2015. With other versions of Visual C++, the screen content is slightly different.

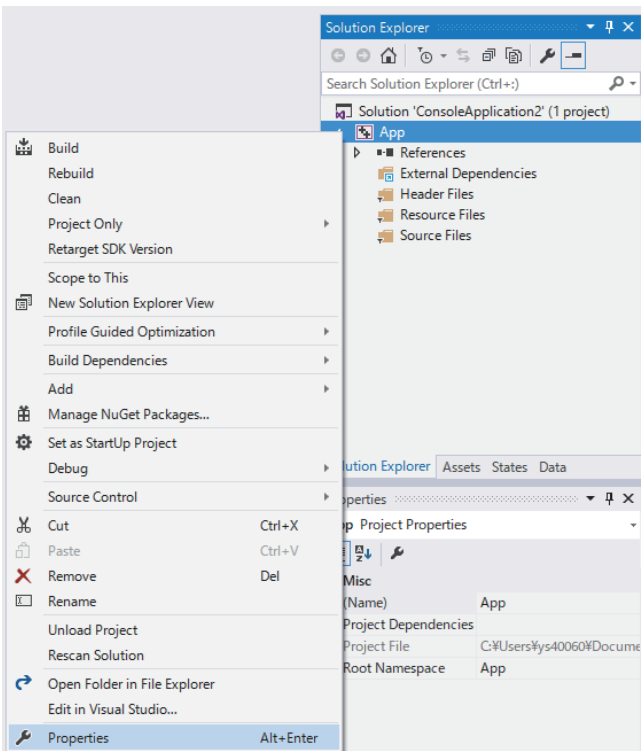
1. Open a program to create, and select "x64" in "Solution Platform" in the toolbar.



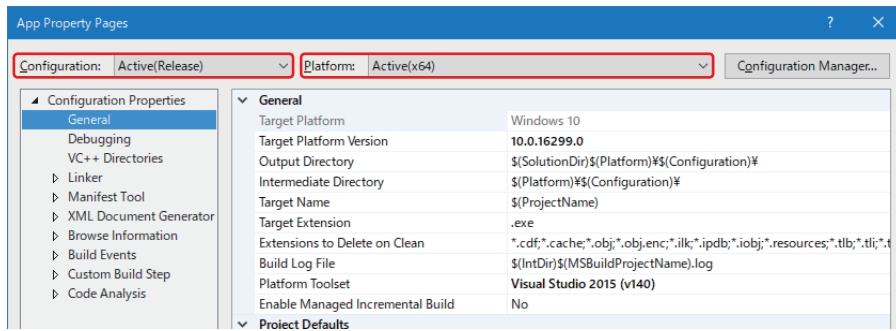
2. Select [View] ⇒ [Solution Explorer].



3. In the "Solution Explorer" window, select a project. From the right-click shortcut menu, select [Properties].





4. Under "Configuration" and "Platform", select the configuration and platform for which settings are to be changed.



Point

- When there are multiple configurations, they can be chosen at one time by selecting "All configurations".
- When there are multiple platforms, they can be chosen at one time by selecting "All platforms".

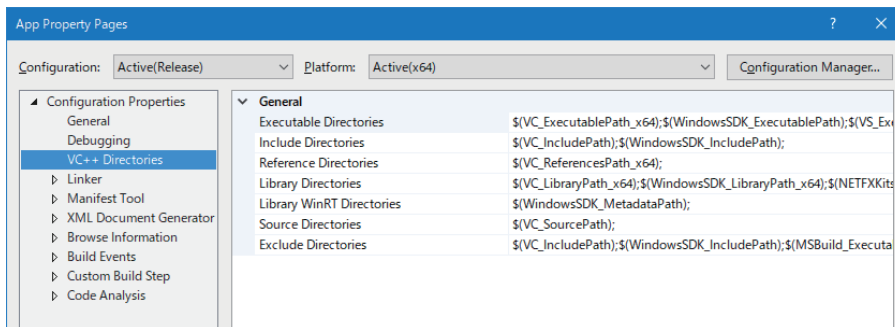
5. Configure the include files and library files.


-  Page 9 Configuration of include files
-  Page 10 Configuration of library files

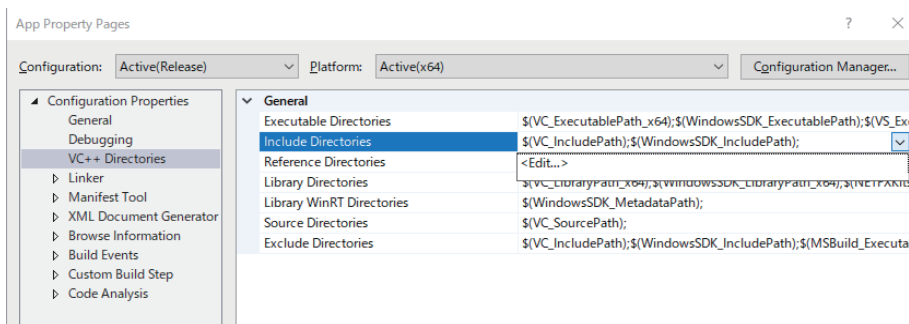
Configuration of include files



This section shows the configuration procedure for include files.

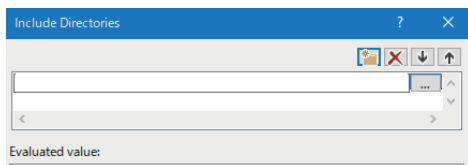
1. Choose "Configuration properties", and then "VC++ directory".




2. Select "Include directory", click , and then select "Edit".



3. Click , and then .



4. At the "Select directory" screen, select the folder that stores the include file (CCPUFunc.h).

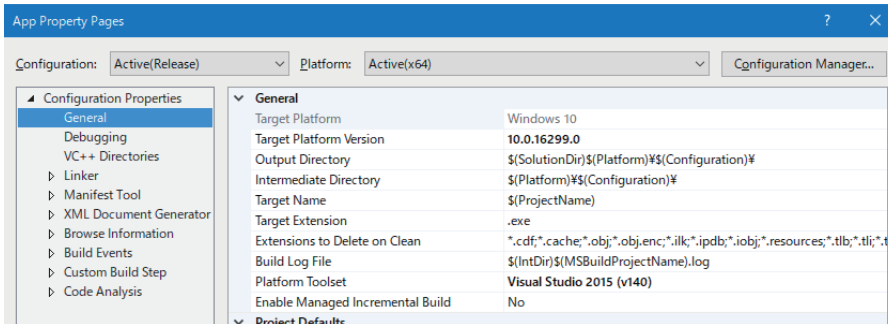
- Standalone development configuration: C:\MELIPC\INCLUDE
- Cross development configuration: Folder to which the include file (CCPUFunc.h) was copied ( Page 6 Development Configuration)


5. Add "#include <CCPUFunc.h>" to the head of the user program.

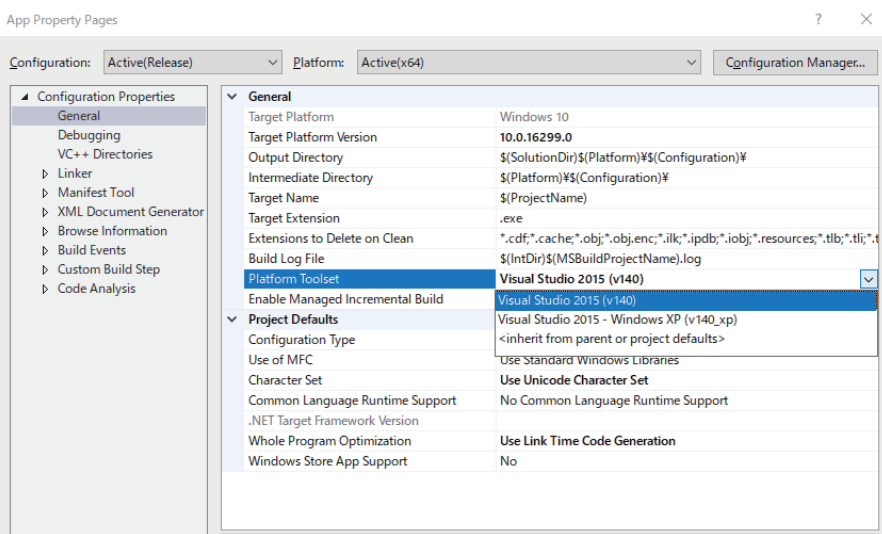
Configuration of library files

This section shows the configuration procedure for library files.

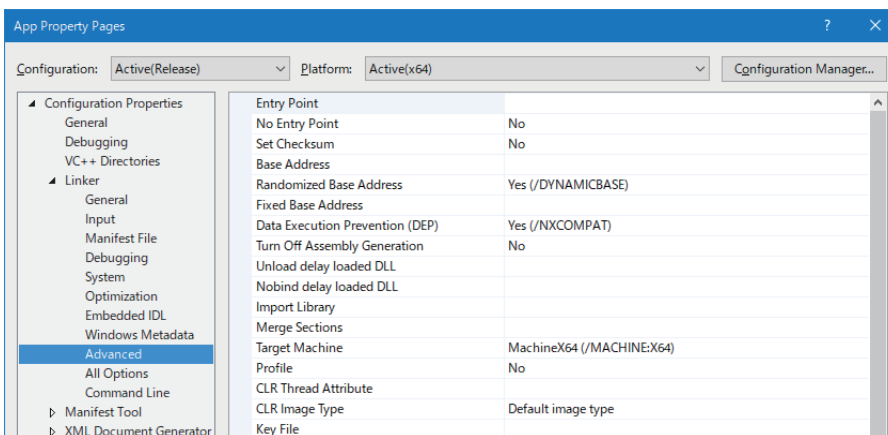
1. Choose "Configuration properties", and then "All".



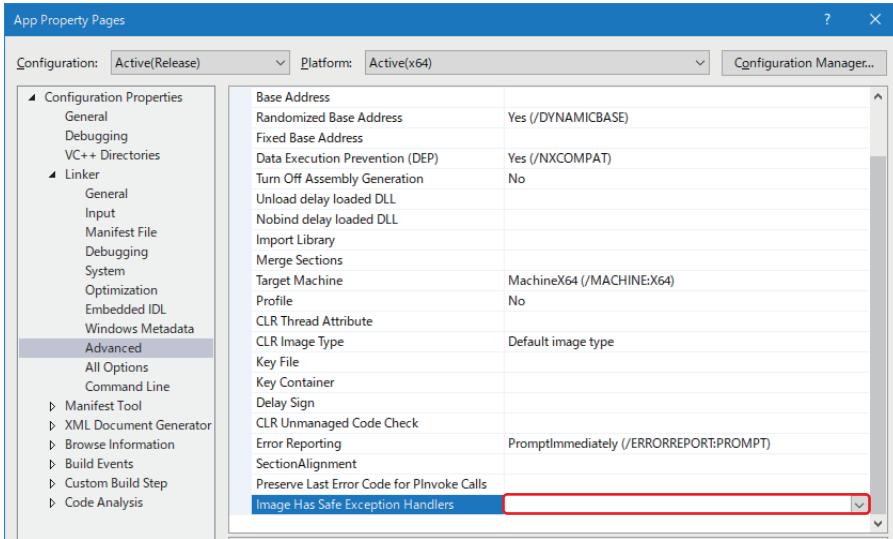
2. Select "Platform toolset", click , and then select "Visual Studio 2015 (v140)".



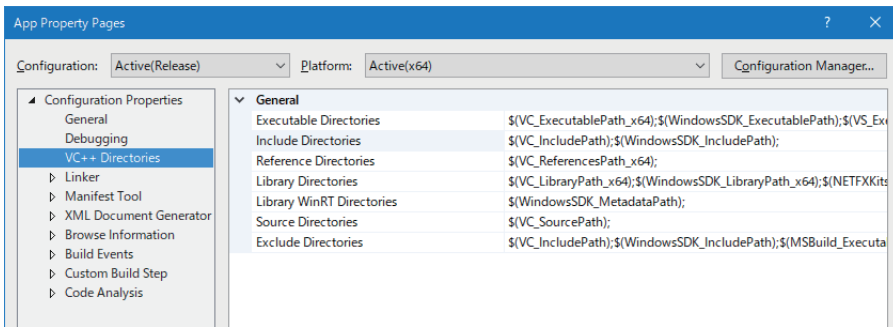
3. Choose "Configuration properties", "Linker", and then "Advanced settings".




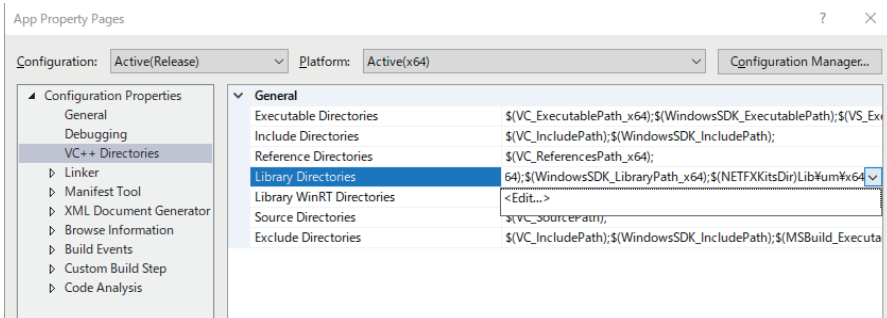
4. Choose "Image including safe exception handler", and then make sure that the options are not configured. If the options are configured, remove the options.





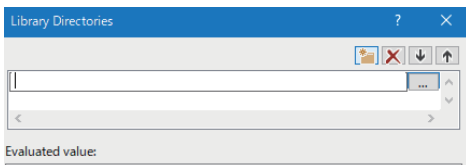
5. Choose "Configuration properties", and then "VC++ directory".



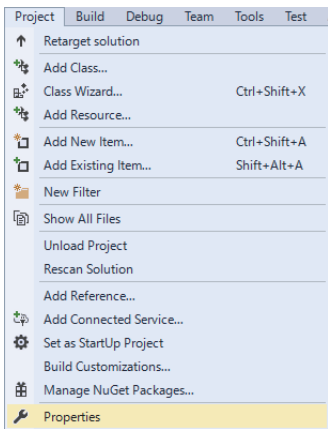
6. Select "Library directory", click , and then select "Edit".



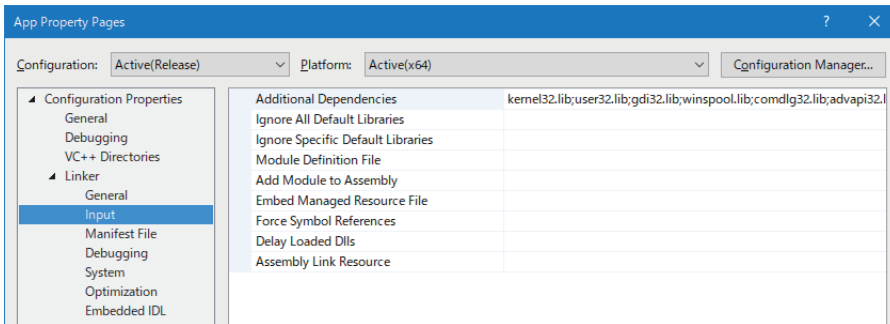
7. Click , and then .




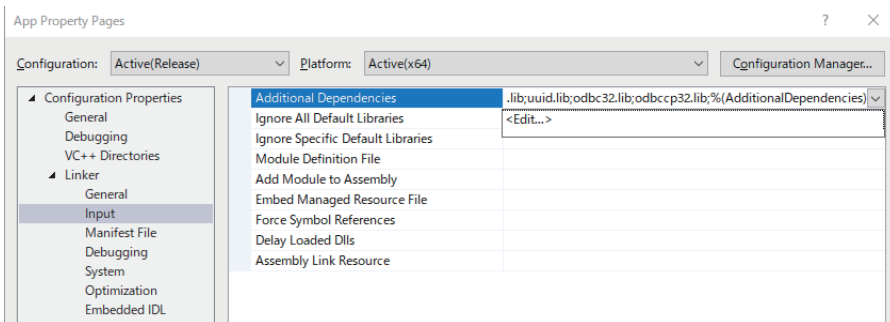
- At the "Select directory" screen, select the folder that stores the library file (CCPUFunc.lib).
 - Standalone development configuration: C:\MELIPC\LIB
 - Cross development configuration: Folder to which the library file (CCPUFunc.lib) was copied (Page 6 Development Configuration)
- Open the program to be created, and select [Project], and then [Properties].



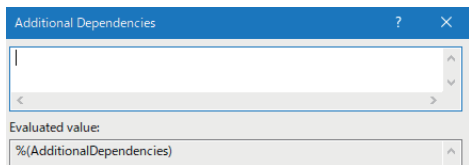
- Choose "Configuration properties", "Linker", and then "Enter".



- Select "Add dependent file", click , and then select "Edit".



- In the dialog box of the "Add dependent file" screen, enter "CCPUFunc.lib".



1.3 C Controller Module Dedicated Functions

C Controller dedicated functions of the dedicated function libraries are used to control C Controller module.

For the configuration of the dedicated function library, refer to the following manual.

 MELIPC MI5000 Series User's Manual (Startup)

The following section shows the argument specifications of the C Controller module dedicated functions and considerations when creating user programs.

Argument specifications

This section shows the argument specifications of the C Controller module dedicated functions.

Device type

For the device types to be specified by the C Controller module dedicated functions, either a code or a device name can be specified.

Device names are defined in the include files (CCPUFunc.h).

■ Device type for own station access

The following table shows the device types that can be specified by the argument [Device type (sDevType)].

Device name (device)	Code		Device name specification
	Decimal	Hexadecimal	
Internal relay (M)	4	4H	Dev_CCPU_M
Special relay (SM)	5	5H	Dev_CCPU_SM
Data register (D)	13	DH	Dev_CCPU_D
Special register (SD)	14	EH	Dev_CCPU_SD
Link relay (B)	23	17H	Dev_CCPU_B
Link register (W)	24	18H	Dev_CCPU_W
File register (ZR)	220	DCH	Dev_CCPU_ZR

Target functions

 Page 18 CCPU_ReadDevice

 Page 22 CCPU_ResetDevice

 Page 23 CCPU_SetDevice

 Page 26 CCPU_WriteDevice

■ Device types for accessing CC-Link IE Field Networks

The following table shows the device types that can be specified by the argument [Device type (sDevType)].

Device name (device)	Code		Device name specification
	Decimal	Hexadecimal	
Direct link input (RX)	1000	3E8H	Dev_LX
Direct link output (RY)	2000	7D0H	Dev_LY
Direct link register (RW _r , RW _w) ^{*1}	24000	5DC0H	Dev_LW
Direct link special relay (SB)	25000	61A8H	Dev_LSB
Direct link special register (SW)	28000	6D60H	Dev_LSW

*1 To access direct link registers (RW_w, RW_r), specify the device numbers as follows.

RW_w: 0H to 1FFFH

RW_r: 2000H to 3FFFH

Target functions

 Page 19 CCPU_ReadLinkDevice

 Page 27 CCPU_WriteLinkDevice

Considerations

This section shows the considerations when using the C Controller module dedicated functions.

Execution of the C Controller module dedicated functions

When the following C controller module dedicated functions are run on the Windows part, the actual processing is carried out on the VxWorks part. Because data is sent and received between the Windows part and VxWorks part every time the function is executed, it takes longer than when running the same process on the VxWorks part.

- CCPU_FromBuf
- CCPU_ReadDevice
- CCPU_ReadLinkDevice
- CCPU_ResetDevice
- CCPU_SetDevice
- CCPU_ToBuf
- CCPU_WriteDevice
- CCPU_WriteLinkDevice

When these functions return an error code (258) or the execution of the function is not completed, make sure that the VxWorks part is running normally.

Accessing programmable controller devices/buffer memory

If the data size to be read or written is 1,921 words or greater when executing the following C controller module dedicated functions in the Windows part, reading or writing is split over two or more times.

- CCPU_FromBuf
- CCPU_ReadDevice
- CCPU_ReadLinkDevice
- CCPU_ToBuf
- CCPU_WriteDevice
- CCPU_WriteLinkDevice

If the same programmable controller device/buffer memory is accessed from the Windows part and VxWorks part at the same time at this time, the data inconsistency may occur on the Windows part.

To prevent data inconsistency, use exclusive control so that the same programmable controller device/buffer memory is not accessed at the same time from the Windows part and VxWorks part.

2 FUNCTION LIST

This chapter shows the functions that can be used for a MELIPC.

2.1 C Controller Module Dedicated Functions

2

The C Controller module dedicated functions are as listed below.

Function name	Function	Reference
CCPU_FromBuf	Reads data from the buffer memory of a MELIPC.	Page 17 CCPU_FromBuf
CCPU_ReadDevice	Reads data from the internal user devices and internal system devices of a MELIPC.	Page 18 CCPU_ReadDevice
CCPU_ReadLinkDevice	Reads data from link devices of CC-Link IE Field Network.	Page 19 CCPU_ReadLinkDevice
CCPU_ReadSharedMemory	Reads data from the shared memory of a MELIPC.	Page 20 CCPU_ReadSharedMemory
CCPU_ResetDevice	Resets internal user devices and internal system devices (bit devices) of a MELIPC.	Page 22 CCPU_ResetDevice
CCPU_SetDevice	Sets internal user devices and internal system devices (bit devices) of a MELIPC.	Page 23 CCPU_SetDevice
CCPU_SendInterOSEvent	Notifies inter OS events.	Page 24 CCPU_SendInterOSEvent
CCPU_ToBuf	Writes data to the buffer memory of a MELIPC.	Page 25 CCPU_ToBuf
CCPU_ReceiveInterOSEvent	Waits for notification of inter OS events.	Page 21 CCPU_ReceiveInterOSEvent
CCPU_WriteDevice	Writes data to internal user devices and internal system devices of a MELIPC.	Page 26 CCPU_WriteDevice
CCPU_WriteLinkDevice	Writes data to link devices of CC-Link IE Field Network.	Page 27 CCPU_WriteLinkDevice
CCPU_WriteSharedMemory	Writes data to the shared memory of a MELIPC.	Page 28 CCPU_WriteSharedMemory

3 DETAILS OF FUNCTIONS

This chapter shows the details on the functions used for MELIPC MI5000 series.

3.1 C Controller Module Dedicated Functions

This section shows the details of C Controller module dedicated functions.

CCPU_FromBuf

Reads data from the buffer memory of a MELIPC.

Format

short CCPU_FromBuf(unsigned short usloNo, unsigned long ulOffset, unsigned long ulSize, unsigned short* pusDataBuf, unsigned long ulBufSize)

Argument

Argument	Name	Description	IN/OUT
usloNo	Module position	Specify 0x03E0.	IN
ulOffset	Offset	Specify the offset in word units.	IN
ulSize	Data size	Specify the read data size in word units.	IN
pusDataBuf	Data storage destination	Specify the storage destination of read data.	OUT
ulBufSize	Data storage destination size	Specify the data storage destination size in word units.	IN

Description

- Reads data of the data size (ulSize) from an address moved by the amount of the offset (ulOffset) from the start of the buffer memory, and then stores it in the data storage destination (pusDataBuf).
- When "0" was specified for the data size (ulSize), a memory size specification error occurs.

Precautions

- Note that the size of data storage destination (ulBufSize) should be equal to or bigger than the data size (ulSize).
- If 1,921 words or greater is specified for the data size, data inconsistency may occur during reading. (Page 14 Accessing programmable controller devices/buffer memory)

Return value

Return value	Description
0(0000H)	Normal
258(0102H)	Processing request transmission error
-208(FF30H)	Offset error
-209(FF2FH)	Memory size specification error
-210(FF2EH)	Read area size error
-264(FEF8H)	Pointer error
-28158(9202H)	WDT error
-28632(9028H)	Module position specification error

For details on error codes, refer to the following section.

Page 29 Function Error Codes

Relevant function

Page 25 CCPU_ToBuf


CCPU_ReadDevice

Reads data from the internal user devices and internal system devices of a MELIPC.

Format

short CCPU_ReadDevice(short sDevType, unsigned long ulDevNo, unsigned long ulSize, unsigned short* pusDataBuf, unsigned long ulBufSize)


Argument

Argument	Name	Description	IN/OUT
sDevType	Device type	Specify the device type.  Page 13 Device type	IN
ulDevNo	Start device number	Specify the start device number. (Only multiples of 16 can be specified for bit devices.)	IN
ulSize	Data size	Specify the read data size in word units.	IN
pusDataBuf	Data storage destination	Specify the storage destination of read data.	OUT
ulBufSize	Data storage destination size	Specify the data storage destination size in word units.	IN

Description

- This function reads data in a device after one specified to the device type (sDevType) and the start device number (ulDevNo) for the size specified to the data size (ulSize), and stores it in the data storage destination (pusDataBuf).
- When "0" was specified for the data size (ulSize), a specification size error occurs.

Precautions

- Note that the size of data storage destination (ulBufSize) should be equal to or bigger than the data size (ulSize).
- If 1,921 words or greater is specified for the data size, data inconsistency may occur during reading. ( Page 14 Accessing programmable controller devices/buffer memory)

Return value

Return value	Description
0(0000H)	Normal
258(0102H)	Processing request transmission error
-210(FF2EH)	Read area size error
-253(FF03H)	Device number specification error
-254(FF02H)	Device type specification error
-255(FF01H)	Size specification error
-264(FEF8H)	Pointer error
-28158(9202H)	WDT error

For details on error codes, refer to the following section.

 Page 29 Function Error Codes

Relevant function

 Page 26 CCPU_WriteDevice


CCPU_ReadLinkDevice

Reads data from link devices of CC-Link IE Field Network.

Format

short CCPU_ReadLinkDevice(unsigned short usloNo, short sDevType, unsigned long ulDevNo, unsigned long ulSize, unsigned short* pusDataBuf, unsigned long ulBufSize)


Argument

Argument	Name	Description	IN/OUT
usloNo	Module position	Specify 0x03E0.	IN
sDevType	Device type	Specify the device type.  Page 13 Device type	IN
ulDevNo	Start device number	Specify the start device number. (Only multiples of 16 can be specified for bit devices.)	IN
ulSize	Data size	Specify the read data size in word units.	IN
pusDataBuf	Data storage destination	Specify the storage destination of read data.	OUT
ulBufSize	Data storage destination size	Specify the data storage destination size in word units.	IN

Description

- Reads data of the device specified to the device type (sDevType) and the start device number (ulDevNo) of the CC-Link IE field network and later devices for the size specified to the data size (ulSize), and stores it in the data storage destination (pusDataBuf).
- When "0" was specified for the data size (ulSize), a specification size error occurs.

Precautions

- Note that the size of data storage destination (ulBufSize) should be equal to or bigger than the data size (ulSize).
- If 1,921 words or greater is specified for the data size, data inconsistency may occur during reading. ( Page 14 Accessing programmable controller devices/buffer memory)


Return value

Return value	Description
0(0000H)	Normal
258(0102H)	Processing request transmission error
-210(FF2EH)	Read area size error
-253(FF03H)	Device number specification error
-254(FF02H)	Device type specification error
-255(FF01H)	Size specification error
-264(FEF8H)	Pointer error
-28158(9202H)	WDT error
-28632(9028H)	Module position specification error

For details on error codes, refer to the following section.

 Page 29 Function Error Codes

Relevant function

 Page 27 CCPU_WriteLinkDevice

CCPU_ReadSharedMemory

Reads data from the shared memory of a MELIPC.

Format

short CCPU_ReadSharedMemory(unsigned long ulOffset, unsigned long ulSize, unsigned char* pucDataBuf, unsigned long ulBufSize)

Argument

Argument	Name	Description	IN/OUT
ulOffset	Offset	Specify the offset in byte units.	IN
ulSize	Data size	Specify the read data size in byte units.	IN
pucDataBuf	Data storage destination	Specify the storage destination of read data.	OUT
ulBufSize	Data storage destination size	Specify the data storage destination size in byte units.	IN

Description

- Reads data of the data size (ulSize) from an address moved by the amount of the offset (ulOffset) from the start of the shared memory, and then stores it in the data storage destination (pusDataBuf).
- The size of the shared memory area is 256 MB (268,435,456 bytes (10000000H)). Specify the offset (ulOffset) and data size (ulSize) so that data in the shared memory area is read.
- When "0" was specified for the data size (ulSize), a memory size specification error occurs.

Precautions

Note that the size of data storage destination (ulBufSize) should be equal to or bigger than the data size (ulSize).

Return value

Return value	Description
0(0000H)	Normal
-208(FF30H)	Offset error
-209(FF2FH)	Memory size specification error
-210(FF2EH)	Read area size error
-264(FEF8H)	Pointer error
-375(FE89H)	Shared memory access error

For details on error codes, refer to the following section.

 Page 29 Function Error Codes

Relevant function

 Page 28 CCPU_WriteSharedMemory

CCPU_ReceiveInterOSEvent

Waits for notification of inter OS events.

Format

short CCPU_ReceiveInterOSEvent(short sOsEventNo, unsigned long ulTimeout)

Argument

Argument	Name	Description	IN/OUT
sOsEventNo	Inter OS event number	Specify 1. (If a value other than "1" is specified, an error is returned.)	IN
ulTimeout	Timeout	Specify the timeout value in milliseconds. (0H to FFFFFFFFH) (When FFFFFFFFH is specified, the function waits for an event infinitely.)	IN


Description

- Waits for notification of the inter OS event specified by the inter OS event number (sOsEventNo).
- When an inter OS event was already reported when this function was executed, the user application restarts soon after the inter OS event wait status.
- When the same inter OS event was reported multiple times when this function was executed, the user application processes them as a single inter OS event notification.
- When an inter OS event was reported when multiple tasks were waiting for the same inter OS event notification, only the task that executed this function first receives the notification and restarts execution.

Return value

Return value	Description
0(0000H)	Normal
-231(FF19H)	Event timeout error
-234(FF16H)	Event wait error
-366(FE92H)	Event number specification error

For details on error codes, refer to the following section.

 Page 29 Function Error Codes


CCPU_ResetDevice

Resets internal user devices and internal system devices (bit devices) of a MELIPC.

Format

short CCPU_ResetDevice(short sDevType, unsigned long ulDevNo)

Argument

Argument	Name	Description	IN/OUT
sDevType	Device type	Specify the device type.  Page 13 Device type	IN
ulDevNo	Device number	Specify a device number.	IN


Description

Resets (turns OFF) the bit device of the MELIPC specified to the device type (sDevType) and device number (ulDevNo).

Return value

Return value	Description
0(0000H)	Normal
258(0102H)	Processing request transmission error
-253(FF03H)	Device number specification error
-254(FF02H)	Device type specification error
-28158(9202H)	WDT error

For details on error codes, refer to the following section.

 Page 29 Function Error Codes

Relevant function

 Page 23 CCPU_SetDevice


CCPU_SetDevice

Sets internal user devices and internal system devices (bit devices) of a MELIPC.

Format

short CCPU_SetDevice(short sDevType, unsigned long ulDevNo)

Argument

Argument	Name	Description	IN/OUT
sDevType	Device type	Specify the device type.  Page 13 Device type	IN
ulDevNo	Device number	Specify a device number.	IN

Description

Sets (turns ON) the bit device of the MELIPC specified to the device type (sDevType) and the device number (ulDevNo).

Return value

Return value	Description
0(0000H)	Normal
258(0102H)	Processing request transmission error
-253(FF03H)	Device number specification error
-254(FF02H)	Device type specification error
-28158(9202H)	WDT error

For details on error codes, refer to the following section.

 Page 29 Function Error Codes

Relevant function

 Page 22 CCPU_ResetDevice

CCPU_SendInterOSEvent

Notifies inter OS events.

Format

short CCPU_SendInterOSEvent(short sOsEventNo)

Argument

Argument	Name	Description	IN/OUT
sOsEventNo	Inter OS event number	Specify 1. (If a value other than "1" is specified, an error is returned.)	IN


Description

Sends notice of the inter OS event specified by the inter OS event number (sOsEventNo) to the VxWorks part from Windows part.

Return value

Return value	Description
0(0000H)	Normal
-366(FE92H)	Event number invalid
-376(FE88H)	Inter OS event notification error

For details on error codes, refer to the following section.

 Page 29 Function Error Codes

CCPU_ToBuf

Writes data to the buffer memory of a MELIPC.

Format

short CCPU_ToBuf(unsigned short usloNo, unsigned long ulOffset, unsigned long ulSize, unsigned short* pusDataBuf, unsigned long ulBufSize)


Argument

Argument	Name	Description	IN/OUT
usloNo	Module position	Specify 0x03E0.	IN
ulOffset	Offset	Specify the offset in word units.	IN
ulSize	Data size	Specify the write data size in word units.	IN
pusDataBuf	Data storage destination	Specify the storage destination of write data.	IN
ulBufSize	Data storage destination size	Specify '0'.	IN

Description

- Writes data of the data storage destination (pusDataBuf) of the data size (ulSize) to the address moved by the amount of the offset (ulOffset) from the start of the buffer memory.
- When "0" was specified for the data size (ulSize), a memory size specification error occurs.
- If this function is executed when the operating status of the MELIPC is not RUN, a STOP error occurs.

Precautions

- If 1,921 words or greater is specified for the data size, data inconsistency may occur during writing. ( Page 14 Accessing programmable controller devices/buffer memory)

Return value

Return value	Description
0(0000H)	Normal
258(0102H)	Processing request transmission error
-208(FF30H)	Offset error
-209(FF2FH)	Memory size specification error
-264(FEF8H)	Pointer error
-28158(9202H)	WDT error
-28632(9028H)	Module position specification error
-28640(9020H)	STOP error

For details on error codes, refer to the following section.

 Page 29 Function Error Codes

Relevant function

 Page 17 CCPU_FromBuf


CCPU_WriteDevice

Writes data to internal user devices and internal system devices of a MELIPC.

Format

short CCPU_WriteDevice(short sDevType, unsigned long ulDevNo, unsigned long ulSize, unsigned short* pusDataBuf, unsigned long ulBufSize)


Argument

Argument	Name	Description	IN/OUT
sDevType	Device type	Specify the device type.  Page 13 Device type	IN
ulDevNo	Start device number	Specify the start device number. (Only multiples of 16 can be specified for bit devices.)	IN
ulSize	Data size	Specify the write data size in word units.	IN
pusDataBuf	Data storage destination	Specify the storage destination of write data.	IN
ulBufSize	Data storage destination size	Specify '0'.	IN

Description

- This function writes data in the data storage destination (pusDataBuf) for the size specified to the data size (ulSize) to a device after one specified to the device type (sDevType) and the start device number (ulDevNo).
- When "0" was specified for the data size (ulSize), a specification size error occurs.

Precautions

- If 1,921 words or greater is specified for the data size, data inconsistency may occur during writing. ( Page 14 Accessing programmable controller devices/buffer memory)

Return value

Return value	Description
0(0000H)	Normal
258(0102H)	Processing request transmission error
-253(FF03H)	Device number specification error
-254(FF02H)	Device type specification error
-255(FF01H)	Size specification error
-264(FEF8H)	Pointer error
-28158(9202H)	WDT error

For details on error codes, refer to the following section.

 Page 29 Function Error Codes

Relevant function

 Page 18 CCPU_ReadDevice


CCPU_WriteLinkDevice

Writes data to link devices of CC-Link IE Field Network.

Format

short CCPU_WriteLinkDevice(unsigned short usloNo, short sDevType, unsigned long ulDevNo, unsigned long ulSize, unsigned short* pusDataBuf, unsigned long ulBufSize)


Argument

Argument	Name	Description	IN/OUT
usloNo	Module position	Specify 0x03E0.	IN
sDevType	Device type	Specify the device type.  Page 13 Device type	IN
ulDevNo	Start device number	Specify the start device number. (Only multiples of 16 can be specified for bit devices.)	IN
ulSize	Data size	Specify the write data size in word units.	IN
pusDataBuf	Data storage destination	Specify the storage destination of write data.	IN
ulBufSize	Data storage destination size	Specify '0'.	IN

Description

- Writes data of the data storage destination (pusDataBuf) of the size specified to the data size (ulSize) to the device specified by the device type (sDevType) and the start device number (ulDevNo) of the CC-Link IE field network and later devices.
- When "0" was specified for the data size (ulSize), a specification size error occurs.

Precautions

- If 1,921 words or greater is specified for the data size, data inconsistency may occur during writing. ( Page 14 Accessing programmable controller devices/buffer memory)


Return value

Return value	Description
0(0000H)	Normal
258(0102H)	Processing request transmission error
-253(FF03H)	Device number specification error
-254(FF02H)	Device type specification error
-255(FF01H)	Size specification error
-264(FEF8H)	Pointer error
-28158(9202H)	WDT error
-28632(9028H)	Module position specification error

For details on error codes, refer to the following section.

 Page 29 Function Error Codes

Relevant function

 Page 19 CCPU_ReadLinkDevice

CCPU_WriteSharedMemory

Writes data to the shared memory of a MELIPC.

Format

short CCPU_WriteSharedMemory(unsigned long ulOffset, unsigned long ulSize, unsigned char* pucDataBuf)

Argument

Argument	Name	Description	IN/OUT
ulOffset	Offset	Specify the offset in word units.	IN
ulSize	Data size	Specify the write data size in byte units.	IN
pucDataBuf	Data storage destination	Specify the storage destination of write data.	IN

Description

- Writes data of the data storage destination (pusDataBuf) of the data size (ulSize) to the address moved by the amount of the offset (ulOffset) from the start of the shared memory.
- The size of the shared memory area is 256 MB (268,435,456 bytes (10000000H)). Specify the offset (ulOffset) and data size (ulSize) so that data in the shared memory area is written.
- When "0" was specified for the data size (ulSize), a memory size specification error occurs.

Return value

Return value	Description
0(0000H)	Normal
-208(FF30H)	Offset error
-209(FF2FH)	Memory size specification error
-227(FF1DH)	Control code send error
-264(FEF8H)	Pointer error
-375(FE89H)	Shared memory access error

For details on error codes, refer to the following section.

 Page 29 Function Error Codes

Relevant function

 Page 20 CCPU_ReadSharedMemory

APPENDIX

Appendix 1 Function Error Codes

This section shows the codes for errors occurred in the dedicated function library and their corrective actions.

Error code		Description	Corrective action
Decimal	Hexadecimal		
1	0001H	<ul style="list-style-type: none"> ■Driver not started The driver is not started. 	<ul style="list-style-type: none"> • Check the channel number. • Correct the error that occurred when the driver is started. • Check the status of the system drive of the MELIPC. • Check if the operating system is running normally.
2	0002H	<ul style="list-style-type: none"> ■Timeout error <ul style="list-style-type: none"> • A timeout occurred while waiting for the response. • The module specified as the communication target is not supported. 	<ul style="list-style-type: none"> • Review the operating status and mounting condition of the access target station. • Retry on the user program. • Increase the timeout value of MELSEC data link function. • Check if the module specified as the communication target is supported.
66	0042H	<ul style="list-style-type: none"> ■Already opened error The specified channel has already been opened. 	The open processing is required only one time. (If this error occurred, the path of the correct channel will be returned to the argument.)
67	0043H	<ul style="list-style-type: none"> ■Already closed error The specified channel has already been closed. 	The close processing is required only one time.
69	0045H	<ul style="list-style-type: none"> ■Unsupported function performing error An unsupported function in the target station was performed. 	<ul style="list-style-type: none"> • Check the path of the channel, network number, and station number. • Check if the function performed in the target station is supported.
70	0046H	<ul style="list-style-type: none"> ■Station number error <ul style="list-style-type: none"> • The specified station number is incorrect. • The request for other stations was issued to the own station, or the network number was not '0' even though the station number was the own station (FFH). 	Correct the network number and station number specified in the user program.
77	004DH	<ul style="list-style-type: none"> ■Memory reservation error ■Resource shortage error ■Task over error Reserving sufficient memory failed. Or, there are too many tasks using the dedicated function library.	<ul style="list-style-type: none"> • The memory may be insufficient. End other running tasks. Alternatively, reduce the excess size. • Reduce the number of tasks using the dedicated function library and retry the operation. • Review the size or number specified to the arguments of the user program. • Check if the MELIPC is running normally. • Reset the MELIPC, or turn the power OFF and ON.
102	0066H	<ul style="list-style-type: none"> ■Data send error ■Restart error Sending data failed, or an attempt was made to send data during restart.	<ul style="list-style-type: none"> • Retry. • Retry after completion of the restart. • Check if the MELIPC is running normally. • Reset the MELIPC.
103	0067H	<ul style="list-style-type: none"> ■Reception error Receiving data failed.	<ul style="list-style-type: none"> • Retry. • Check if the MELIPC is running normally. • Reset the MELIPC, or turn the power OFF and ON.
130	0082H	<ul style="list-style-type: none"> ■Device number error <ul style="list-style-type: none"> • The specified device number is out of range. • The specified bit device number is not a multiple of 8. 	Check the device number.
131	0083H	<ul style="list-style-type: none"> ■Number of device points error <ul style="list-style-type: none"> • The specified number of device points is out of range. • The specified number of bit device points is not a multiple of 8. 	Check the specified number of device points.
258	0102H	<ul style="list-style-type: none"> ■Processing request transmission error An error occurred when processing execution was requested for the VxWorks part.	<ul style="list-style-type: none"> • Make sure that the VxWorks part is operating normally. • Reset the MELIPC.
16384 to 20479	4000H to 4FFFH	<ul style="list-style-type: none"> ■Errors detected in the access target CPU module 	Refer to the user's manual of the access target CPU module.

Error code		Description	Corrective action
Decimal	Hexadecimal		
16480	4060H	<p>■Online registration error An online debugging function (online change, etc.) or remote operation is being executed by another engineering tool or another CPU module.</p>	<ul style="list-style-type: none"> • Complete the operation of the other engineering tool or other CPU module, and then execute it again. • If operation of the other engineering tool or other CPU module is suspended, execute the operation again using the other engineering tool or other CPU module so that it completes normally, and then execute again.
-201	FF37H	<p>■Module identification error The specified module identification is unavailable.</p>	Check the specified module identification.
-203	FF35H	<p>■I/O signal error The specified I/O signal is out of range.</p>	Check the specified I/O signal.
-204	FF34H	<p>■I/O access size error The specified access size of I/O signal is out of range.</p>	Check the specified access size of I/O signal (I/O number and read/write size in words).
-208	FF30H	<p>■Offset error • The specified offset is out of range. • An AnS series module (buffer memory) was accessed.</p>	Check the specified offset.
-209	FF2FH	<p>■Memory size specification error • The specified offset and its size are out of range. • The address of data storage buffer pointer is 0. • The specified size is 0.</p>	<ul style="list-style-type: none"> • Check the specified memory size. • Check the offset and its size. • Check the specified data storage buffer pointer.
-210	FF2EH	<p>■Read area size error The read area size is smaller than the read size.</p>	<ul style="list-style-type: none"> • Check the read size. • Check the read area size.
-211	FF2DH	<p>■Time setting error The specified time is out of range.</p>	Check the specified time.
-217	FF27H	<p>■Driver not started The driver is not started.</p>	Check if the driver is started.
-220	FF24H	<p>■WDT type error The specified WDT type is out of range.</p>	Check the specified WDT type.
-223	FF21H	<p>■Memory reservation error Reserving sufficient memory failed.</p>	Check if sufficient memory is available.
-224	FF20H	<p>■LED setting value error The specified LED setting value is out of range.</p>	Check the specified LED setting value.
-225	FF1FH	<p>■Event number specification error The specified event number is out of range or duplicated.</p>	Check the specified event number.
-227	FF1DH	<p>■Control code send error Sending control code failed.</p>	<ul style="list-style-type: none"> • Retry. • Check if the MELIPC is running normally. • Reset the MELIPC.
-231	FF19H	<p>■Event timeout error A timeout occurred while waiting for an event.</p>	<ul style="list-style-type: none"> • Increase the timeout time. • Check if the interrupt event number (interrupt pointer number) is set correctly.
-232	FF18H	<p>■CPU number specification error The specified CPU number is incorrect.</p>	Check the value of the specified CPU number.
-234	FF16H	<p>■Event wait error An error other than timeout occurred while the function waits for the event.</p>	<ul style="list-style-type: none"> • Check if a program is forcibly being terminated. • Check if the MELIPC is running normally. • Reset the MELIPC, or turn the power OFF and ON.
-235	FF15H	<p>■Number of event settings specification error The specified number of event settings is out of range.</p>	Check the number of specified event settings.
-236	FF14H	<p>■Remote operation specification code error The remote operation specification code is out of range.</p>	Check the specified remote operation specification code.
-237	FF13H	<p>■Detailed information character string specification error The length of the specified character string was out of range or characters which cannot be specified was specified.</p>	Correct the length of the specified character string or character string data.
-238	FF12H	<p>■Event log registration error Registering an event log failed.</p>	Reset the MELIPC, or turn the power OFF and ON.
-240	FF10H	<p>■Clock data incorrect error The clock data to be set or the read clock data is incorrect.</p>	<ul style="list-style-type: none"> • Check the clock data to be set. • If this error occurs when reading the clock data, set the data again.
-241	FF0FH	<p>■Cycle specification error • The specified cycle is out of range. • The cycle was set even when it had already been set.</p>	<ul style="list-style-type: none"> • Check the specified cycle. • Check if the cycle has been already set.
-242	FF0EH	<p>■Synchronization type specification error The specified synchronization type is out of range.</p>	Check the specified synchronization type.

Error code		Description	Corrective action
Decimal	Hexadecimal		
-245	FF0BH	<p>■Not executable during interrupt service routine A function was executed from an interrupt service routine without specifying "1" (ISR) to the call source flag.</p>	Specify "1" to the call source flag (ISR) and execute the function again.
-246	FF0AH	<p>■Timer event registration error Registering a timer event failed.</p>	<ul style="list-style-type: none"> • Retry. • Check if the MELIPC is running normally. • Reset the MELIPC, or turn the power OFF and ON.
-253	FF03H	<p>■Device number specification error</p> <ul style="list-style-type: none"> • The specified device number is out of range. • The specified bit device number is not a multiple of 16. 	Correct the start device number of the specified device.
-254	FF02H	<p>■Device type specification error The specified device type is unavailable.</p>	Check the specified device type.
-255	FF01H	<p>■Size specification error</p> <ul style="list-style-type: none"> • The specified number of words is out of range. • The specified size is 0. 	Correct the specified start device number and number of words.
-256	FF00H	<p>■Response completion wait timeout error A timeout occurred while waiting for completion of a response of a processing requested to other CPU modules.</p>	<ul style="list-style-type: none"> • Increase the timeout time specified to the argument. • Review and correct the user program (including other tasks which execute motion CPU interaction functions). • Review the program used for the request destination CPU module and correct it to perform the processing requested from other CPU modules, for example, by adding the WAIT instruction.
-257	FEFFH	<p>■Interrupt event type specification error The value specified to the interrupt event type is out of range.</p>	Check the specified value.
-258	FEFEH	<p>■Interrupt pointer number specification error The value specified as the interrupt pointer number is out of range.</p>	Check the specified value.
-259	FEFDH	<p>■Interrupt service routine unregistered error The processing was not registered when enabling the processing corresponding to an event (interrupt).</p>	Register the processing for the event (interrupt) and perform the operation again.
-263	FEF9H	<p>■Caller flag error The value specified to the caller flag is out of range.</p>	Review the specified value, and specify a value within the range.
-264	FEF8H	<p>■Pointer error The address of the specified pointer is incorrect.</p>	Check the address of the specified pointer.
-265	FEF7H	<p>■Target system specification error The value specified in the target system is out of range.</p>	Check the specified value.
-266	FEF6H	<p>■WDT start error The user WDT is being started.</p>	Check the user WDT settings.
-267	FEF5H	<p>■Authentication error The username or password is incorrect.</p>	Check the specified username and password.
-268	FEF4H	<p>■Security error The setting content of the security function is incorrect.</p>	Check the settings of the specified security function.
-279	FEE9H	<p>■File specification error</p> <ul style="list-style-type: none"> • The specified file does not exist. • A file with the same name already exists. (The existing file is overwrite-protected.) • A file cannot be created in the specified path, or the specified path does not exist. 	<ul style="list-style-type: none"> • Check the specified file. • Check if the existing file is overwrite-protected. • Check if no files exist with the same name as the file to be created.
-280	FEE8H	<p>■File access error The specified file is in use.</p>	Check if the specified file is in use.
-288	FEE0H	<p>■Individual identification information read error Reading individual identification information failed.</p>	<ul style="list-style-type: none"> • Check if the MELIPC is running normally. • Reset the MELIPC, or turn the power OFF and ON.
-289	FEDFH	<p>■Dot matrix LED Display mode error The dot matrix LED is in standard mode, but a setting other than "User" is selected for the Display mode.</p>	Using the menu operation, select "User" as the Display mode, and then close the menu.
-290	FEDEH	<p>■Dot matrix LED display status error The dot matrix LED is not in normal mode.</p>	Using the menu operation, select "User" as the Display mode, and then close the menu.
-292	FEDCH	<p>■User drive shutdown error The shutdown processing of the user drive failed.</p>	<ul style="list-style-type: none"> • Check if files on the user drive are being accessed. • Check if all files on the user drive have been closed.
-295	FED9H	<p>■Selected operation is being checked This function was executed while checking the selected operation.</p>	Execute the function after checking the operation.

Error code		Description	Corrective action
Decimal	Hexadecimal		
-296	FED8H	■Setting data size error The setting data size is out of range.	Check the setting data size.
-328	FEB8H	■Group number error The specified group number is out of range.	Check the specified group number.
-329	FEB7H	■Link time specification error The specified link scan time is out of range.	Check the specified link scan time.
-330	FEB6H	■Number of detections of disconnected slave stations error The specified number of detections of disconnected slave stations is out of range.	Check the specified number of detections of disconnected slave stations.
-331	FEB5H	■CC-Link IE Field Network Basic parameter unset The function was executed without setting CC-Link IE Field Network Basic parameters.	Set the CC-Link IE Field Network Basic parameters with MI Configurator.
-332	FEB4H	■Slave station timeout time specification range error	Check the timeout time for the disconnection detection of the specified slave station.
-335	FEB1H	■Link scan data assurance wait time timed out The specified data assurance wait time is elapsed.	Increase the timeout time specified to the argument.
-336	FEB0H	■Slave station number specification error The specified slave station number does not exist in the slave station.	Check the specified slave station number.
-361	FE97H	■Data assurance ended error Ending of data assurance was attempted when data assurance was not being performed.	Make sure that data assurance is ended only when the user program is performing data assurance.
-362	FE96H	■CC-Link IE Field Network hardware error Data assurance of the CC-Link IE field network cannot be started due to a hardware error.	<ul style="list-style-type: none"> • Check if the MELIPC is running normally. • Reset the MELIPC. • Retry.
-366	FE92H	■Event number specification error The specified event number is out of range.	Check the specified event number.
-367	FE91H	■Data assurance start timeout error A timeout occurred at the start of data assurance.	<ul style="list-style-type: none"> • Increase the timeout time of the argument to be specified by the user program. • Retry.
-368	FE90H	■Data assurance setting error There was an attempt to start data assurance when "Station unit block guarantee" was "Disable" in the parameters of the CC-Link IE Field Network.	In the parameters of the CC-Link IE Field Network, change "Station unit block guarantee" to "Enable".
-369	FE8FH	■Data link error Starting of data assurance was attempted when there was no data linking.	Restart the data link.
-371	FE8DH	■Data assurance running error Starting of data assurance was attempted when data assurance was already being performed.	Make sure that data assurance is not started in two instances by the user program.
-372	FE8CH	■Timeout value invalid The specified timeout value is out of range for the OS linking function.	Check the specified timeout value.
-373	FE8BH	■Timeout error A timeout occurred during inter OS shared semaphore acquisition.	Consider the synchronization, or the time required for processing by a target under exclusive control, and then set a sufficiently long timeout value.
-374	FE8AH	■Windows part forced restart not permitted There was an attempt by a C Controller module dedicated function to perform a Windows part forced restart when the "Windows part forced restart" setting in Basic parameters was "Disable".	Configure "Enable" for the "Windows part forced restart" setting in the basic parameters.
-375	FE89H	■Shared memory access error Access of the shared memory of the OS linking function has failed.	<ul style="list-style-type: none"> • Check if the MELIPC is running normally. • Reset the MELIPC. • Retry.
-376	FE88H	■Inter OS event notification error Notification of an inter-OS event of the OS linking function has failed.	<ul style="list-style-type: none"> • Check if the MELIPC is running normally. • Reset the MELIPC. • Retry.
-377	FE87H	■Data assurance running by other task error Ending of data assurance was attempted when data assurance was being performed by another task.	Revise the user program so that the same task starts and ends data assurance.

Error code		Description	Corrective action
Decimal	Hexadecimal		
-25056	9E20H	<p>■Processing code error A request which cannot be performed in the request destination was issued.</p>	Check the network number and station number of the request destination.
-26334	9922H	<p>■Reset error</p> <ul style="list-style-type: none"> • Another task using the same channel was reset while accessing another station. • A reset operation was performed while monitoring with MI Configurator. 	<ul style="list-style-type: none"> • Retry. • Monitor again.
-26336	9920H	<p>■Routing request error for unsupported station A routing request to another loop was issued to a station which does not support the routing function.</p>	Check the settings of routing parameters.
-28150	920AH	<p>■Device access error during data link stop The devices (RX, RY, RWw, and RWr) of the own station were accessed when the data link was not performed.</p>	<ul style="list-style-type: none"> • Check the specified device start number and size, or the device range of the parameter for the master station. • Restart the data link. <p>(Note that data is written/read despite this error, however, the contents of the data will not be guaranteed.)</p>
-28151	9209H	<p>■Abnormal data reception error Abnormal response data received.</p>	Check if an error occurred in the request destination CPU module or link module. (If the status is normal, resend the request.)
-28158	9202H	<p>■WDT error WDT (system/user) error occurred.</p>	Reset the MELIPC, or turn the power OFF and ON.
-28410	9106H	<p>■Target CPU busy error The target CPU module is busy.</p>	<ul style="list-style-type: none"> • Add the processing to wait for the completion of the target operation or to retry the operation in the user program. • Increase the timeout time specified to the argument in the user program.
-28412	9104H	<p>■Target CPU unsupported error An unsupported request was issued to the target CPU module.</p>	Change the target CPU module specified in the user program.
-28413	9103H	<p>■Target CPU down error The target CPU module is down.</p>	Check the operating status of the target CPU module. In case of an error, troubleshoot while following the user manual of the target CPU module.
-28414	9102H	<p>■Target CPU abnormal start error A request was issued to the CPU module which is not operating normally.</p>	Check the operating status of the target CPU module. In case of an error, troubleshoot while following the user manual of the target CPU module.
-28415	9101H	<p>■Target CPU major error A request was issued to the CPU module in which a major error occurred.</p>	Check the operating status of the target CPU module. In case of an error, troubleshoot while following the user manual of the target CPU module.
-28416	9100H	<p>■Target CPU mounting error A request was issued by specifying the CPU number in the state where no CPU module is mounted.</p>	<ul style="list-style-type: none"> • Check the mounting condition of the target CPU module. • Change the target CPU number specified in the user program.
-28622	9032H	<p>■Target module busy error</p> <ul style="list-style-type: none"> • The target module is busy. • The own station channel or the target station storage channel is used for other instructions, or multiple identical instructions are being executed. 	Add the processing to wait for the completion of the target operation or to retry the operation in the user program.
-28624	9030H	<p>■Function unsupported error</p> <ul style="list-style-type: none"> • Any processing was performed to the module which does not support the station-based block data assurance function for cyclic data. • Any processing was performed to the module on which the station-based block data assurance function for cyclic data is not set. • An attempt was made to access a module which was not controlled by the host CPU module. 	<ul style="list-style-type: none"> • Check if the target CC-Link module supports the station-based block data assurance function for cyclic data. • Check if the station-based block data assurance function for cyclic data is set for the target module. • Check if the control CPU of the target module is the host CPU module.
-28626	902EH	<p>■Control data setting value out of range error The specified control data is out of range.</p>	Check the value set to the control data.
-28627	902DH	<p>■Transient unsupported error Transient transmission cannot be performed via the specified communication route and target. (Another station was specified when the station number of the own station is '64' during CC-Link communication.)</p>	<ul style="list-style-type: none"> • Check the communication route and target which support the transient request. • Change the station number of the own station.
-28628	902CH	<p>■Pointer address specification error An incorrect address was specified to the argument pointer.</p>	Check the address of the specified pointer.

Error code		Description	Corrective action
Decimal	Hexadecimal		
-28629	902BH	<p>■WDT not started error</p> <p>An attempt was made to reset a WDT before starting it.</p>	Reset the WDT after starting it.
-28630	902AH	<p>■WDT startup error</p> <p>An attempt was made to start WDT while the other WDT is starting up.</p>	Start the WDT after stopping the WDT which is starting up.
-28631	9029H	<p>■Buffer access range error</p> <ul style="list-style-type: none"> • The specified offset is out of range. • The specified offset and its size are out of range. 	<ul style="list-style-type: none"> • Check the specified offset. • Check the specified buffer size. • Check the offset and its size.
-28632	9028H	<p>■I/O number error</p> <ul style="list-style-type: none"> • The specified I/O number is out of range. • No accessible module is mounted on the specified I/O number. 	Check the specified I/O number.
-28640	9020H	<p>■STOP error</p> <p>The output or buffer memory writing was requested when the operating status of the CPU module is STOP.</p>	Change the operation status of the CPU module to RUN.
-28653	9013H	<p>■I/O assignment error</p> <ul style="list-style-type: none"> • An attempt was made to read the input value (X) from an output module. • An attempt was made to write the output value (Y) to an input module. • An attempt was made to read the output value (Y) from an input module. 	Check the input number (X) and output number (Y).
-28660	900CH	<p>■Access size error</p> <p>The specified size is out of range.</p>	Review the specified offset and size.
-28661	900BH	<p>■Inaccessible error</p> <p>Inaccessible area was specified.</p>	Review the specified offset and size.
-28662	900AH	<p>■CPU number specification error</p> <p>The specified CPU number is out of range or unavailable.</p>	<ul style="list-style-type: none"> • Review the specified CPU number. • Check the operating status of the specified CPU module.
-28664	9008H	<p>■Data send area occupied</p>	Retry.
-28665	9007H	<p>■No registration data error</p>	Reset the MELIPC, or turn the power OFF and ON.
-28666	9006H	<p>■Data length error</p>	Reset the MELIPC, or turn the power OFF and ON.
-28668	9004H	<p>■Reply data stored error</p>	Resend the request.
-28669	9003H	<p>■Area number error</p> <p>The specified area number, offset address, and mode are out of range.</p>	Review the area number, offset address, and mode.
-28671	9001H	<p>■Module identification error</p>	<ul style="list-style-type: none"> • Review the parameters. • Check the specified module. • Reset the MELIPC, or turn the power OFF and ON.
-28672	9000H	<p>■Processing code error</p>	Reset the MELIPC, or turn the power OFF and ON.

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REVISIONS

*The manual number is given on the bottom left of the back cover.

Revision date	*Manual number	Description
May 2018	SH(NA)-081934ENG-A	First edition
May 2018	SH(NA)-081934ENG-B	Partial correction

Japanese manual number: SH-081933-C

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WARRANTY

Please confirm the following product warranty details before using this product.

1. Gratis Warranty Term and Gratis Warranty Range

If any faults or defects (hereinafter "Failure") found to be the responsibility of Mitsubishi occurs during use of the product within the gratis warranty term, the product shall be repaired at no cost via the sales representative or Mitsubishi Service Company.

However, if repairs are required onsite at domestic or overseas location, expenses to send an engineer will be solely at the customer's discretion. Mitsubishi shall not be held responsible for any re-commissioning, maintenance, or testing on-site that involves replacement of the failed module.

[Gratis Warranty Term]

The gratis warranty term of the product shall be for one year after the date of purchase or delivery to a designated place. Note that after manufacture and shipment from Mitsubishi, the maximum distribution period shall be six (6) months, and the longest gratis warranty term after manufacturing shall be eighteen (18) months. The gratis warranty term of repair parts shall not exceed the gratis warranty term before repairs.

[Gratis Warranty Range]

- (1) The range shall be limited to normal use within the usage state, usage methods and usage environment, etc., which follow the conditions and precautions, etc., given in the instruction manual, user's manual and caution labels on the product.
- (2) Even within the gratis warranty term, repairs shall be charged for in the following cases.
 1. Failure occurring from inappropriate storage or handling, carelessness or negligence by the user. Failure caused by the user's hardware or software design.
 2. Failure caused by unapproved modifications, etc., to the product by the user.
 3. When the Mitsubishi product is assembled into a user's device, Failure that could have been avoided if functions or structures, judged as necessary in the legal safety measures the user's device is subject to or as necessary by industry standards, had been provided.
 4. Failure that could have been avoided if consumable parts (battery, backlight, fuse, etc.) designated in the instruction manual had been correctly serviced or replaced.
 5. Failure caused by external irresistible forces such as fires or abnormal voltages, and Failure caused by force majeure such as earthquakes, lightning, wind and water damage.
 6. Failure caused by reasons unpredictable by scientific technology standards at time of shipment from Mitsubishi.
 7. Any other failure found not to be the responsibility of Mitsubishi or that admitted not to be so by the user.

2. Onerous repair term after discontinuation of production

- (1) Mitsubishi shall accept onerous product repairs for seven (7) years after production of the product is discontinued. Discontinuation of production shall be notified with Mitsubishi Technical Bulletins, etc.
- (2) Product supply (including repair parts) is not available after production is discontinued.

3. Overseas service

Overseas, repairs shall be accepted by Mitsubishi's local overseas FA Center. Note that the repair conditions at each FA Center may differ.

4. Exclusion of loss in opportunity and secondary loss from warranty liability

Regardless of the gratis warranty term, Mitsubishi shall not be liable for compensation to:

- (1) Damages caused by any cause found not to be the responsibility of Mitsubishi.
- (2) Loss in opportunity, lost profits incurred to the user by Failures of Mitsubishi products.
- (3) Special damages and secondary damages whether foreseeable or not, compensation for accidents, and compensation for damages to products other than Mitsubishi products.
- (4) Replacement by the user, maintenance of on-site equipment, start-up test run and other tasks.

5. Changes in product specifications

The specifications given in the catalogs, manuals or technical documents are subject to change without prior notice.

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SH(NA)-081934ENG-B(1805)
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