



Programmable Controller

MELSEC iQ-R
series

MELSEC iQ-R CC-Link System Master/Local
Module Function Block Reference

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1 FUNCTION BLOCK (FB) LIST

This chapter lists the FBs of the CC-Link system master/local modules.

Name*1	Description
M+RJ61BT11_DeviceRead	Reads the specified number of points of data from the buffer memory or programmable controller device of another station.
M+RJ61BT11_DeviceWrite	Writes the specified number of points of data to the buffer memory or programmable controller device of another station.
M+RJ61BT11_Recv	Automatically performs handshake with another station and reads the specified number of points of data from the buffer memory of the station.
M+RJ61BT11_Send	Automatically performs handshake with another station and writes the specified number of points of data to the buffer memory of the station.
M+RJ61BT11_AutomaticUpdateBufferRead	Reads the specified number of points of data from the automatic update buffer of another station.
M+RJ61BT11_AutomaticUpdateBufferWrite	Writes the specified number of points of data to the automatic update buffer of another station.
M+RJ61BT11_SetParameter	Sets the network parameters in the master station.

*1 An FB name ends in the FB version information such as "_00A"; however, this reference manual leaves out it.

Precautions

- The module FBs of the CC-Link system master/local modules do not include error recovery processing. Please create error recovery processing separately according to the system and required operations.
- If message "If the program is compiled, the number of device points in the auto device setting is too small." appears, adjust the automatic device setting.
- If upgrading module FB versions updates instructions, adds a new instruction, or adds a new device, please consult your local Mitsubishi representative.

2 CC-Link SYSTEM MASTER/LOCAL MODULE FB

2.1 M+RJ61BT11_DeviceRead

Name

M+RJ61BT11_DeviceRead

Overview

Item	Description
Functional overview	Reads the specified number of points of data from the buffer memory or programmable controller device of another station.
Symbol	<p>The diagram shows a central box labeled 'M+RJ61BT11_DeviceRead'. On the left side, there are six input lines labeled (1) through (6): (1) B: i_bEN, (2) DUT: i_stModule, (3) UW: i_uStationNumber, (4) UW: i_uAccessCode, (5) UW: i_uTargetAddress, and (6) UW: i_uReadDataLength. On the right side, there are six output lines labeled (7) through (11): (7) o_bENO: B, (8) o_bOK: B, (9) o_bErr: B, (10) o_uErrId: UW, and (11) o_uReadData: UW.</p>

Labels

Input arguments

No.	Variable name	Name	Data type	Range	Description
(1)	i_bEN	Execution command	Bit	Off, on	On: Start the module FB. Off: Do not start the module FB.
(2)	i_stModule	Module label	Structure	—	Specify the module for which the FB is to be executed. Specify the module label of relevant modules. (Example) BT11_1
(3)	i_uStationNumber	Station number	Word [Unsigned] /Bit String [16-bit]	0 to 64	Specify the target station number. 0 to 64: Target station number
(4)	i_uAccessCode	Access code Attribute code	Word [Unsigned] /Bit String [16-bit]	—	Specify the read buffer memory type or device type. ☞ MELSEC iQ-R Programming Manual (Instructions, Standard Functions/ Function Blocks)
(5)	i_uTargetAddress	Buffer memory address or device number	Word [Unsigned] /Bit String [16-bit]	—	Specify the start address of the read buffer memory or the start number of the read device.
(6)	i_uReadDataLength	Number of read points	Word [Unsigned] /Bit String [16-bit]	1 to 480	Specify the number of read points in word.

■ Output arguments

No.	Variable name	Name	Data type	Default value	Description
(7)	o_bENO	Execution status	Bit	Off	On: In execution Off: Not in execution
(8)	o_bOK	Normal completion	Bit	Off	The module FB has been processed normally when this argument is on.
(9)	o_bErr	Error completion	Bit	Off	The module FB has been processed abnormally when this argument is on.
(10)	o_uErrId	Error code	Word [Unsigned] /Bit String [16-bit]	0	An error code is stored at error completion.
(11)	o_uReadData	Read data storage device	Word [Unsigned] /Bit String [16-bit]	0	The read data is stored.

FB details

Item	Description	
Available devices	Target module	RJ61BT11
	CPU modules	RCPU
	Engineering tool	GX Works3
Language	Ladder diagram	
Number of basic steps	49 steps The number of steps of the FB embedded in a program depends on the CPU module used, the input/output definitions, and the options setting of GX Works3. For the options setting of GX Works3, refer to the GX Works3 Operating Manual.	
Processing	When i_bEN (execution command) is turned on, the function reads the specified number of points of data from the buffer memory or programmable controller device of another station.	
FB compilation method	Macro type	
FB operation	Pulse type (multiple-scan execution type)	
Input condition for FB_EN	None	

Item	Description
Timing chart of I/O signals	<p>[For normal end]</p> <p>[For error completion] (same as when a module error occurs)</p> <p>(1): Error code</p>
Precautions	<ul style="list-style-type: none"> • This FB does not include error recovery processing. Please create error recovery processing separately according to the system and required operations. • This FB uses the GP.RIRD instruction. • Turn off i_bEN (execution command) after o_bOK (normal completion) or o_bErr (error completion) is turned on. By turning off i_bEN (execution command), o_bOK (normal completion) or o_bErr (error completion) is turned off and o_uErrId (error code) is cleared to 0.

Error code

Error code	Description	Action
4000H to 4FFFH	An error occurred in a CPU module.	MELSEC iQ-R CPU Module User's Manual (Application)
B000H to BFFFH	An error occurred in a CC-Link System Master/Local Module.	MELSEC iQ-R CC-Link System Master/Local Module User's Manual (Application)

Operation parameters

No operation parameter is applicable to M+RJ61BT11_DeviceRead.

2.2 M+RJ61BT11_DeviceWrite

Name

M+RJ61BT11_DeviceWrite

Overview

Item	Description																																			
Functional overview	Writes the specified number of points of data to the buffer memory or programmable controller device of another station.																																			
Symbol	<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: 0 auto;"> <p style="text-align: center;">M+RJ61BT11_DeviceWrite</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%; text-align: right;">(1) —</td> <td style="width: 40%;">B: i_bEN</td> <td style="width: 10%;"></td> <td style="width: 40%;">o_bENO: B</td> <td style="width: 5%; text-align: left;">(8) —</td> </tr> <tr> <td style="text-align: right;">(2) —</td> <td>DUT: i_stModule</td> <td></td> <td>o_bOK: B</td> <td style="text-align: left;">(9) —</td> </tr> <tr> <td style="text-align: right;">(3) —</td> <td>UW: i_uStationNumber</td> <td></td> <td>o_bErr: B</td> <td style="text-align: left;">(10) —</td> </tr> <tr> <td style="text-align: right;">(4) —</td> <td>UW: i_uAccessCode</td> <td></td> <td>o_uErrId: UW</td> <td style="text-align: left;">(11) —</td> </tr> <tr> <td style="text-align: right;">(5) —</td> <td>UW: i_uTargetAddress</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: right;">(6) —</td> <td>UW: i_uWriteDataLength</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: right;">(7) —</td> <td>UW: i_uWriteData</td> <td></td> <td></td> <td></td> </tr> </table> </div>	(1) —	B: i_bEN		o_bENO: B	(8) —	(2) —	DUT: i_stModule		o_bOK: B	(9) —	(3) —	UW: i_uStationNumber		o_bErr: B	(10) —	(4) —	UW: i_uAccessCode		o_uErrId: UW	(11) —	(5) —	UW: i_uTargetAddress				(6) —	UW: i_uWriteDataLength				(7) —	UW: i_uWriteData			
(1) —	B: i_bEN		o_bENO: B	(8) —																																
(2) —	DUT: i_stModule		o_bOK: B	(9) —																																
(3) —	UW: i_uStationNumber		o_bErr: B	(10) —																																
(4) —	UW: i_uAccessCode		o_uErrId: UW	(11) —																																
(5) —	UW: i_uTargetAddress																																			
(6) —	UW: i_uWriteDataLength																																			
(7) —	UW: i_uWriteData																																			

Labels

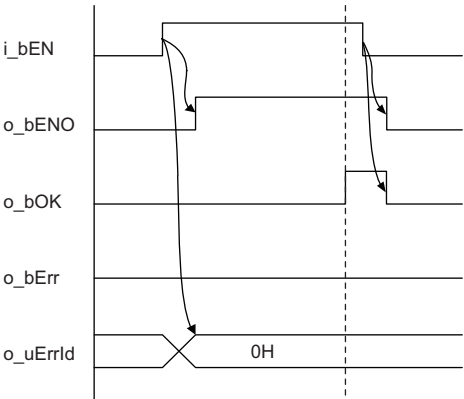
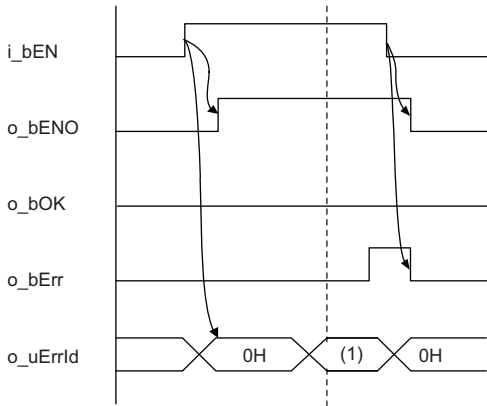
Input arguments

No.	Variable name	Name	Data type	Range	Description
(1)	i_bEN	Execution command	Bit	Off, on	On: Start the module FB. Off: Do not start the module FB.
(2)	i_stModule	Module label	Structure	—	Specify the module for which the FB is to be executed. Specify the module label of relevant modules. (Example) BT11_1
(3)	i_uStationNumber	Station number	Word [Unsigned] /Bit String [16-bit]	0 to 64	Specify the target station number. 0 to 64: Target station number
(4)	i_uAccessCode	Access code Attribute code	Word [Unsigned] /Bit String [16-bit]	—	Specify the write buffer memory type or device type. ☐ MELSEC iQ-R Programming Manual (Instructions, Standard Functions/Function Blocks)
(5)	i_uTargetAddress	Buffer memory address or device number	Word [Unsigned] /Bit String [16-bit]	—	Specify the start address of the write buffer memory or the start number of the write device.
(6)	i_uWriteDataLength	Number of write points	Word [Unsigned] /Bit String [16-bit]	1 to 480	Specify the number of write points in word.
(7)	i_uWriteData	Write data Storage device	Word [Unsigned] /Bit String [16-bit]	—	Specify the start address of the device containing the write data.

■Output arguments



No.	Variable name	Name	Data type	Default value	Description
(8)	o_bEN	Execution status	Bit	Off	On: In execution Off: Not in execution
(9)	o_bOK	Normal completion	Bit	Off	The module FB has been processed normally when this argument is on.
(10)	o_bErr	Error completion	Bit	Off	The module FB has been processed abnormally when this argument is on.
(11)	o_uErrId	Error code	Word	0	An error code is stored at error completion.

FB details

Item	Description	
Available devices	Target module	RJ61BT11
	CPU modules	RCPU
	Engineering tool	GX Works3
Language	Ladder diagram	
Number of basic steps	49 steps The number of steps of the FB embedded in a program depends on the CPU module used, the input/output definitions, and the options setting of GX Works3. For the options setting of GX Works3, refer to the GX Works3 Operating Manual.	
Processing	When i_bEN (execution command) is turned on, this function writes the specified number of points of data to the buffer memory or programmable controller device of another station.	
FB compilation method	Macro type	
FB operation	Pulse execution type (multiple-scan execution type)	
Input condition for FB_EN	None	
Timing chart of I/O signals	<p>[For normal end]</p>  <p>[For error completion] (same as when a module error occurs)</p>  <p>(1): Error code</p>	

Item	Description
Precautions	<ul style="list-style-type: none"> This FB does not include error recovery processing. Please create error recovery processing separately according to the system and required operations. This FB uses the GP.RIWT instruction. Turn off i_bEN (execution command) after o_bOK (normal completion) or o_bErr (error completion) is turned on. By turning off i_bEN (execution command), o_bOK (normal completion) or o_bErr (error completion) is turned off and o_uErrId (error code) is cleared to 0.

Error code

Error code	Description	Action
4000H to 4FFFH	An error occurred in a CPU module.	 MELSEC iQ-R CPU Module User's Manual (Application)
B000H to BFFFH	An error occurred in a CC-Link System Master/Local Module.	 MELSEC iQ-R CC-Link System Master/Local Module User's Manual (Application)

Operation parameters

No operation parameter is applicable to M+RJ61BT11_DeviceWrite.

2.3 M+RJ61BT11_Recv

Name

M+RJ61BT11_Recv

Overview

Item	Description		
Functional overview	Automatically performs handshake with another station and reads the specified number of points of data from the buffer memory of the station. This function is available for modules, such as AJ65BT-R2(N), which have interlock signals for handshake.		
Symbol	<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: 0 auto;"> <p style="text-align: center;">M+RJ61BT11_Recv</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top;"> (1) — B: i_bEN (2) — DUT: i_stModule (3) — UW: i_uStationNumber (4) — UW: i_uTargetAddress (5) — UW: i_uReadDataLength (6) — UW: i_uInterLockData </td> <td style="width: 50%; vertical-align: top; text-align: right;"> o_bENO: B — (7) o_bOK: B — (8) o_bErr: B — (9) o_uErrId: UW — (10) o_uReadData: UW — (11) </td> </tr> </table> </div>	(1) — B: i_bEN (2) — DUT: i_stModule (3) — UW: i_uStationNumber (4) — UW: i_uTargetAddress (5) — UW: i_uReadDataLength (6) — UW: i_uInterLockData	o_bENO: B — (7) o_bOK: B — (8) o_bErr: B — (9) o_uErrId: UW — (10) o_uReadData: UW — (11)
(1) — B: i_bEN (2) — DUT: i_stModule (3) — UW: i_uStationNumber (4) — UW: i_uTargetAddress (5) — UW: i_uReadDataLength (6) — UW: i_uInterLockData	o_bENO: B — (7) o_bOK: B — (8) o_bErr: B — (9) o_uErrId: UW — (10) o_uReadData: UW — (11)		

Labels

Input arguments

No.	Variable name	Name	Data type	Range	Description
(1)	i_bEN	Execution command	Bit	Off, on	On: Start the module FB. Off: Do not start the module FB.
(2)	i_stModule	Module label	Structure	—	Specify the module for which the FB is to be executed. Specify the module label of relevant modules. (Example) BT11_1
(3)	i_uStationNumber	Station number	Word [Unsigned] /Bit String [16-bit]	1 to 64	Specify the target station number. 1 to 64: Target station number
(4)	i_uTargetAddress	Buffer memory address	Word [Unsigned] /Bit String [16-bit]	—	Specify the start address of the read buffer memory.
(5)	i_uReadDataLength	Number of read points	Word [Unsigned] /Bit String [16-bit]	1 to 480	Specify the number of read points in word.
(6)	i_uInterLockData	Interlock signal Storage device	Word [Unsigned] /Bit String [16-bit] (0..2)	—	Specify the start address of the device containing the interlock signal. When the start address is specified using the label, use "ARRAY" for the data type.

■ Output arguments

No.	Variable name	Name	Data type	Default value	Description
(7)	o_bENO	Execution status	Bit	Off	On: In execution Off: Not in execution
(8)	o_bOK	Normal completion	Bit	Off	The module FB has been processed normally when this argument is on.
(9)	o_bErr	Error completion	Bit	Off	The module FB has been processed abnormally when this argument is on.
(10)	o_uErrId	Error code	Word [Unsigned] /Bit String [16-bit]	0	An error code is stored at error completion.
(11)	o_uReadData	Read data storage device	Word [Unsigned] /Bit String [16-bit]	0	The read data is stored.

FB details

Item	Description	
Available devices	Target module	RJ61BT11
	CPU modules	RCPU
	Engineering tool	GX Works3
Language	Ladder diagram	
Number of basic steps	51 steps The number of steps of the FB embedded in a program depends on the CPU module used, the input/output definitions, and the options setting of GX Works3. For the options setting of GX Works3, refer to the GX Works3 Operating Manual.	
Processing	When i_bEN (execution command) is turned on, this function performs handshake with another station and reads the specified number of points of data from the buffer memory of the station.	
FB compilation method	Macro type	
FB operation	Pulse execution type (multiple-scan execution type)	
Input condition for FB_EN	None	

Item	Description
Timing chart of I/O signals	<p>[For normal end]</p> <p>[For error completion] (same as when a module error occurs)</p> <p>(1): Error code</p>
Precautions	<ul style="list-style-type: none"> • This FB does not include error recovery processing. Please create error recovery processing separately according to the system and required operations. • This FB uses the GP.RIRCV instruction. • Turn off i_bEN (execution command) after o_bOK (normal completion) or o_bErr (error completion) is turned on. By turning off i_bEN (execution command), o_bOK (normal completion) or o_bErr (error completion) is turned off and o_uErrId (error code) is cleared to 0.

Error code

Error code	Description	Action
4000H to 4FFFH	An error occurred in a CPU module.	📖 MELSEC iQ-R CPU Module User's Manual (Application)
B000H to BFFFH	An error occurred in a CC-Link System Master/Local Module.	📖 MELSEC iQ-R CC-Link System Master/Local Module User's Manual (Application)

Operation parameters

No operation parameter is applicable to M+RJ61BT11_Recv.

2.4 M+RJ61BT11_Send

Name

M+RJ61BT11_Send

Overview

Item	Description
Functional overview	Automatically performs handshake with another station and writes the specified number of points of data to the buffer memory of the station. This function is available for modules, such as AJ65BT-R2(N), which have interlock signals for handshake.
Symbol	<p>The diagram shows a box labeled 'M+RJ61BT11_Send' with the following connections:</p> <ul style="list-style-type: none"> (1) B: i_bEN (Input) (2) DUT: i_stModule (Input) (3) UW: i_uStationNumber (Input) (4) UW: i_uTargetAddress (Input) (5) UW: i_uWriteDataLength (Input) (6) UW: i_uWriteData (Input) (7) UW: i_uInterLockData (Input) o_bENO: B (8) (Output) o_bOK: B (9) (Output) o_bErr: B (10) (Output) o_uErrId: UW (11) (Output)

Labels

Input arguments

No.	Variable name	Name	Data type	Range	Description
(1)	i_bEN	Execution command	Bit	Off, on	On: Start the module FB. Off: Do not start the module FB.
(2)	i_stModule	Module label	Structure	—	Specify the module for which the FB is to be executed. Specify the module label of relevant modules. (Example) BT11_1
(3)	i_uStationNumber	Station number	Word [Unsigned] /Bit String [16-bit]	1 to 64	Specify the target station number. 1 to 64: Target station number
(4)	i_uTargetAddress	Buffer memory address	Word [Unsigned] /Bit String [16-bit]	—	Specify the start address of the write buffer memory.
(5)	i_uWriteDataLength	Number of write points	Word [Unsigned] /Bit String [16-bit]	1 to 480	Specify the number of write points in word.
(6)	i_uWriteData	Write data Storage device	Word [Unsigned] /Bit String [16-bit]	—	Specify the start address of the device containing the write data.
(7)	i_uInterLockData	Interlock signal Storage device	Word [Unsigned] /Bit String [16-bit] (0..2)	—	Specify the start address of the device containing the interlock signal. When the start address is specified using the label, use "ARRAY" for the data type.

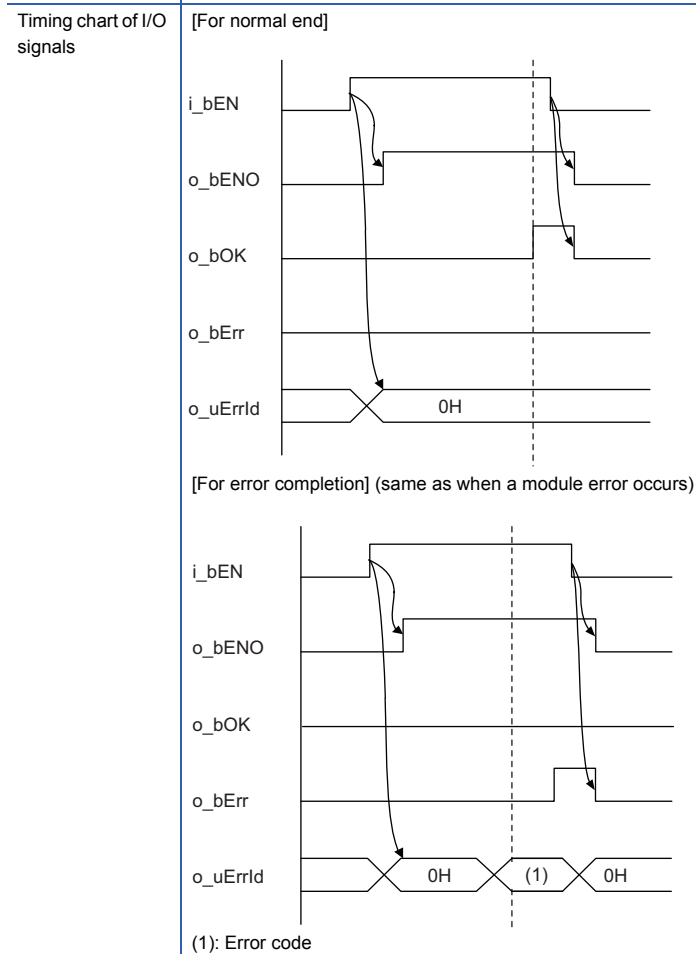
Output arguments

No.	Variable name	Name	Data type	Default value	Description
(8)	o_bENO	Execution status	Bit	Off	On: In execution Off: Not in execution

No.	Variable name	Name	Data type	Default value	Description
(9)	o_bOK	Normal completion	Bit	Off	The module FB has been processed normally when this argument is on.
(10)	o_bErr	Error completion	Bit	Off	The module FB has been processed abnormally when this argument is on.
(11)	o_uErrId	Error code	Word [Unsigned] /Bit String [16-bit]	0	An error code is stored at error completion.



FB details

Item	Description	
Available devices	Target module	RJ61BT11
	CPU modules	RCPU
	Engineering tool	GX Works3
Language	Ladder diagram	
Number of basic steps	51 steps The number of steps of the FB embedded in a program depends on the CPU module used, the input/output definitions, and the options setting of GX Works3. For the options setting of GX Works3, refer to the GX Works3 Operating Manual.	
Processing	When i_bEN (execution command) is turned on, this function performs handshake with another station and writes the specified number of points of data to the buffer memory of the station.	
FB compilation method	Macro type	
FB operation	Pulse execution type (multiple-scan execution type)	
Input condition for FB_EN	None	



Item	Description
Precautions	<ul style="list-style-type: none"> • This FB does not include error recovery processing. Please create error recovery processing separately according to the system and required operations. • This FB uses the GP.RISEND instruction. • Turn off i_bEN (execution command) after o_bOK (normal completion) or o_bErr (error completion) is turned on. By turning off i_bEN (execution command), o_bOK (normal completion) or o_bErr (error completion) is turned off and o_uErrId (error code) is cleared to 0.

Error code

Error code	Description	Action
4000H to 4FFFH	An error occurred in a CPU module.	 MELSEC iQ-R CPU Module User's Manual (Application)
B000H to BFFFH	An error occurred in a CC-Link System Master/Local Module.	 MELSEC iQ-R CC-Link System Master/Local Module User's Manual (Application)

Operation parameters

No operation parameter is applicable to M+RJ61BT11_Send.

2.5 M+RJ61BT11_AutomaticUpdateBufferRead

Name

M+RJ61BT11_AutomaticUpdateBufferRead

Overview

Item	Description
Functional overview	Reads the specified number of points of data from the automatic update buffer of another station. This function available for modules, such as AJ65BT-R2(N), which have an automatic update buffer.
Symbol	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p style="text-align: center;">M+RJ61BT11_AutomaticUpdateBufferRead</p> <pre> (1) — B: i_bEN o_bENO: B — (6) (2) — DUT: i_stModule o_bOK: B — (7) (3) — UW: i_uStationNumber o_uReadData: UW — (8) (4) — UW: i_uTargetAddress (5) — UW: i_uReadDataLength </pre> </div>

Labels

Input arguments

No.	Variable name	Name	Data type	Range	Description
(1)	i_bEN	Execution command	Bit	Off, on	On: Start the module FB. Off: Do not start the module FB.
(2)	i_stModule	Module label	Structure	—	Specify the module for which the FB is to be executed. Specify the module label of relevant modules. (Example) BT11_1
(3)	i_uStationNumber	Target station number/random access buffer specification	Word [Unsigned] /Bit String [16-bit]	0 to 64, FFH	Specify the target station number. 1 to 64: Target station number FFH: Random access buffer specification
(4)	i_uTargetAddress	Automatic update buffer or random access buffer address	Word [Unsigned] /Bit String [16-bit]	—	Specify the offset value from the start of the automatic update buffer assigned to the target station or random access buffer.
(5)	i_uReadDataLength	Number of read points	Word [Unsigned] /Bit String [16-bit]	1 to 4096	Specify the number of read points.

Output arguments

No.	Variable name	Name	Data type	Default value	Description
(6)	o_bENO	Execution status	Bit	Off	On: In execution Off: Not in execution
(7)	o_bOK	Normal completion	Bit	Off	The module FB has been processed normally when this argument is on.
(8)	o_uReadData	Read data storage device	Word [Unsigned] /Bit String [16-bit]	0	The read data is stored.

FB details

Item	Description
Available devices	Target module RJ61BT11
	CPU modules RCPU
	Engineering tool GX Works3
Language	Ladder diagram
Number of basic steps	23 steps The number of steps of the FB embedded in a program depends on the CPU module used, the input/output definitions, and the options setting of GX Works3. For the options setting of GX Works3, refer to the GX Works3 Operating Manual.
Processing	When i_bEN (execution command) is turned on, this function reads the specified number of points of data from the automatic update buffer of another station.
FB compilation method	Macro type
FB operation	Pulse execution type (multiple-scan execution type)
Input condition for FB_EN	None
Timing chart of I/O signals	<p>[For normal end]</p> <p>The timing chart shows three signals: i_bEN, o_bENO, and o_bOK. i_bEN is a pulse that starts before o_bENO and ends after o_bOK. o_bENO is a pulse that starts when i_bEN goes high and ends when i_bEN goes low. o_bOK is a pulse that starts when i_bEN goes low and ends when i_bEN goes high. A vertical dashed line indicates the end of the execution cycle.</p>
Precautions	<ul style="list-style-type: none"> This FB does not include error recovery processing. Please create error recovery processing separately according to the system and required operations. This FB uses the GP.RIFR instruction. Turn off i_bEN (execution command) after o_bOK (normal completion) is turned on. By turning off i_bEN (execution command), o_bOK (normal completion) is turned off.

Operation parameters

No operation parameter is applicable to M+RJ61BT11_AutomaticUpdateFBufferRead.

2.6 M+RJ61BT11_AutomaticUpdateBufferWrite

Name

M+RJ61BT11_AutomaticUpdateBufferWrite

Overview

Item	Description																																				
Functional overview	Writes the specified number of points of data to the automatic update buffer of another station. This function available for modules, such as AJ65BT-R2(N), which have an automatic update buffer.																																				
Symbol	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <p style="text-align: center; margin: 0;">M+RJ61BT11_AutomaticUpdateBufferWrite</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%; text-align: right;">(1) —</td> <td style="width: 40%;">B: i_bEN</td> <td style="width: 10%;"></td> <td style="width: 20%;"></td> <td style="width: 15%;"></td> <td style="width: 5%;"></td> </tr> <tr> <td style="text-align: right;">(2) —</td> <td>DUT: i_stModule</td> <td></td> <td>o_bENO: B</td> <td></td> <td style="text-align: right;">(7)</td> </tr> <tr> <td style="text-align: right;">(3) —</td> <td>UW: i_uStationNumber</td> <td></td> <td>o_bOK: B</td> <td></td> <td style="text-align: right;">(8)</td> </tr> <tr> <td style="text-align: right;">(4) —</td> <td>UW: i_uTargetAddress</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: right;">(5) —</td> <td>UW: i_uWriteData</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: right;">(6) —</td> <td>UW: i_uWriteDataLength</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> </div>	(1) —	B: i_bEN					(2) —	DUT: i_stModule		o_bENO: B		(7)	(3) —	UW: i_uStationNumber		o_bOK: B		(8)	(4) —	UW: i_uTargetAddress					(5) —	UW: i_uWriteData					(6) —	UW: i_uWriteDataLength				
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(3) —	UW: i_uStationNumber		o_bOK: B		(8)																																
(4) —	UW: i_uTargetAddress																																				
(5) —	UW: i_uWriteData																																				
(6) —	UW: i_uWriteDataLength																																				

Labels

Input arguments

No.	Variable name	Name	Data type	Range	Description
(1)	i_bEN	Execution command	Bit	Off, on	On: Start the module FB. Off: Do not start the module FB.
(2)	i_stModule	Module label	Structure	—	Specify the module for which the FB is to be executed. Specify the module label of relevant modules. (Example) BT11_1
(3)	i_uStationNumber	Target station number/random access buffer specification	Word [Unsigned] /Bit String [16-bit]	1 to 64, FFH	Specify the target station number. 1 to 64: Target station number FFH: Random access buffer specification
(4)	i_uTargetAddress	Automatic update buffer or random access buffer address	Word [Unsigned] /Bit String [16-bit]	—	Specify the offset value from the start of the automatic update buffer assigned to the target station or random access buffer.
(5)	i_uWriteDataLength	Number of write points	Word [Unsigned] /Bit String [16-bit]	1 to 4096	Specify the number of write points.
(6)	i_uWriteData	Write data Storage device	Word [Unsigned] /Bit String [16-bit]	—	Specify the start address of the device containing the write data.

Output arguments

No.	Variable name	Name	Data type	Default value	Description
(7)	o_bENO	Execution status	Bit	Off	On: In execution Off: Not in execution
(8)	o_bOK	Normal completion	Bit	Off	The module FB has been processed normally when this argument is on.

FB details

Item	Description	
Available devices	Target module	RJ61BT11
	CPU modules	RCPU
	Engineering tool	GX Works3
Language	Ladder diagram	
Number of basic steps	23 steps The number of steps of the FB embedded in a program depends on the CPU module used, the input/output definitions, and the options setting of GX Works3. For the options setting of GX Works3, refer to the GX Works3 Operating Manual.	
Processing	When i_bEN (execution command) is turned on, this function writes the specified number of points of data to the automatic update buffer of another station.	
FB compilation method	Macro type	
FB operation	Pulse type (multiple-scan execution type)	
Input condition for FB_EN	None	
Timing chart of I/O signals	<p>[For normal end]</p> <p>The timing chart shows three signals: i_bEN, o_bENO, and o_bOK. i_bEN is a pulse that starts high and then goes low. o_bENO is a pulse that starts high when i_bEN goes high and goes low when i_bEN goes low. o_bOK is a pulse that starts high when i_bEN goes high and goes low when i_bEN goes low. A vertical dashed line indicates the end of the execution.</p>	
Precautions	<ul style="list-style-type: none"> • This FB does not include error recovery processing. Please create error recovery processing separately according to the system and required operations. • This FB uses the GP.RITO instruction. • Turn off i_bEN (execution command) after o_bOK (normal completion) is turned on. By turning off i_bEN (execution command), o_bOK (normal completion) is turned off. 	

Operation parameters

No operation parameter is applicable to M+RJ61BT11_AutomaticUpdateFBufferWrite.

2.7 M+RJ61BT11_SetParameter

Name

M+RJ61BT11_SetParameter

Overview

Item	Description
Functional overview	Sets the network parameters in the master station.
Symbol	<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: 10px auto;"> <p style="text-align: center;">M+RJ61BT11_SetParameter</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>(1) — B: i_bEN</p> <p>(2) — DUT: i_stModule</p> <p>(3) — UW: i_uSettingFlag</p> <p>(4) — UW: i_uTotalConnectedNumber</p> <p>(5) — UW: i_uSlaveStationSettingData</p> </div> <div style="width: 45%;"> <p>o_bENO: B — (6)</p> <p>o_bOK: B — (7)</p> <p>o_bErr: B — (8)</p> <p>o_uErrId: UW — (9)</p> </div> </div> <p style="text-align: center; font-size: small;"> pb_uRetryCount pb_uAutomaticReconnectionStationCount pb_uPlcDownSelect pb_uScanModeSetting pb_uReservedStationSpecificationData pb_uErrorInvalidStationSpecificationData pb_uAutomaticRefreshBufferSize </p> </div>

Labels

Input arguments

No.	Variable name	Name	Data type	Range	Description
(1)	i_bEN	Execution command	Bit	Off, on	On: Start the module FB. Off: Do not start the module FB.
(2)	i_stModule	Module label	Structure	—	Specify the module for which the FB is to be executed. Specify the module label of relevant modules. (Example) BT11_1
(3)	i_uSettingFlag	Setting flag	Word [Unsigned] /Bit String [16-bit]	—	Specify whether each setting data is valid or invalid. • 0: Invalid (The default value is used.) • 1: Valid bF bE bD bC bB bA b9 b8 b7 b6 b5 b4 b3 b2 b1 b0 <div style="border: 1px solid black; width: 100%; height: 15px; margin: 5px 0;"></div> b0: Slave station setting data b1: Reserved station specification data b2: Error invalid station specification data b3: Automatic update buffer assignment data b4 to bB: Fixed to 0 bC: Setting of the input data from data link faulty bD: Output data setting when CPU STOP bE and bF: Fixed to 0
(4)	i_uTotalConnectedNumber	Total number of connected modules/stations	Word [Unsigned] /Bit String [16-bit]	1 to 64	Specify the number of slave stations connected.

No.	Variable name	Name	Data type	Range	Description			
(5)	i_uSlaveStationSettingData	Slave station setting data	Word [Unsigned] /Bit String [16-bit] (0..63)	—	<p>Specify the start number of the device for storing the slave station setting data. (Default value: 0)</p> <p>When the start address is specified using the label, use "ARRAY" for the data type.</p> <p>Set the station type, the number of occupied stations, and the station number as follows.</p> <p>bF ... bC bB ... b8 b7 ... b0</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; height: 15px;"></td> <td style="width: 33%;"></td> <td style="width: 33%;"></td> </tr> </table> <p>b0 to b7: Station number b8 to bB: Number of occupied stations bC to bF: Station type</p> <hr/> <p>Station number setting: 1 to 64</p> <hr/> <p>Number of occupied stations setting</p> <ul style="list-style-type: none"> • 1 station: 1 • 2 stations: 2 • 3 stations: 3 • 4 stations: 4 <hr/> <p>Station type setting</p> <ul style="list-style-type: none"> • Ver.1-compatible remote I/O station: 0 • Ver.1-compatible remote device station: 1 • Ver.1-compatible intelligent device station: 2 • Ver.2-compatible remote device station (single): 5 • Ver.2-compatible intelligent device station (single): 6 • Ver.2-compatible remote device station (double): 8 • Ver.2-compatible intelligent device station (double): 9 • Ver.2-compatible remote device station (quadruple): 11 • Ver.2-compatible intelligent device station (quadruple): 12 • Ver.2-compatible remote device station (octuple): 14 • Ver.2-compatible intelligent device station (octuple): 15 			

■Output arguments

No.	Variable name	Name	Data type	Default value	Description
(6)	o_bENO	Execution status	Bit	Off	On: In execution Off: Not in execution
(7)	o_bOK	Normal completion	Bit	Off	Turned on for one scan at normal completion.
(8)	o_bErr	Error completion	Bit	Off	Turned on for one scan at error completion.
(9)	o_uErr_Id	Error code	Word	0	An error code is stored at error completion.

FB details

Item	Description	
Available devices	Target module	RJ61BT11
	CPU modules	RCPU
	Engineering tool	GX Works3
Language	Ladder diagram	
Number of basic steps	112 steps The number of steps of the FB embedded in a program depends on the CPU module used, the input/output definitions, and the options setting of GX Works3. For the options setting of GX Works3, refer to the GX Works3 Operating Manual.	
Processing	When i_bEN (execution command) is turned on, this function, this function sets the network parameters in the master station.	
FB compilation method	Macro type	
FB operation	Pulse type (multiple-scan execution type)	
Input condition for FB_EN	None	
Timing chart of I/O signals	<p>[For normal end]</p> <p>[For error completion] (same as when a module error occurs)</p> <p>(1): Error code</p>	
Precautions	<ul style="list-style-type: none"> This FB does not include error recovery processing. Please create error recovery processing separately according to the system and required operations. This FB uses the GP.RLPASET instruction. Turn off i_bEN (execution command) after o_bOK (normal completion) or o_bErr (error completion) is turned on. By turning off i_bEN (execution command), o_bOK (normal completion) or o_bErr (error completion) is turned off and o_uErrId (error code) is cleared to 0. 	

Error code

Error code	Description	Action
B000H to BFFFH	An error occurred in a CC-Link System Master/Local Module.	MELSEC iQ-R CC-Link System Master/Local Module User's Manual (Application)

Operation parameters

Name	Variable name	Data type	Range	Default value	Description																																																																																				
Number of retries	pb_uRetryCount	Word [Unsigned] /Bit String [16-bit]	1 to 7	3	Set the number of retries to be performed for a communication error station.																																																																																				
Number of automatic return modules	pb_uAutomaticReconnectionStationCount	Word [Unsigned] /Bit String [16-bit]	1 to 10	1	Specify the number of slave stations that can return by one link scan.																																																																																				
Data link setting when CPU is down	pb_uPlcDownSelect	Word [Unsigned] /Bit String [16-bit]	0, 1	0	Specify whether to stop or continue the data link if the CPU module is stopped with an error. <ul style="list-style-type: none"> • 0: Stops the data link. • 1: Continues the data link. 																																																																																				
Scan mode setting	pb_uScanModeSetting	Word [Unsigned] /Bit String [16-bit]	0, 1	0	Set the link scan mode. <ul style="list-style-type: none"> • 0: Link scan is performed asynchronously with a sequence scan. • 1: Link scan is performed synchronously with a sequence scan. 																																																																																				
Reserved station specification data	pb_uReservedStationSpecificationData	Word [Unsigned] /Bit String [16-bit] (0..3)	0000H to FFFFH	0	Specify the reserved station. <ul style="list-style-type: none"> • 0: Not specified • 1: Specified • 1 to 64 in the table indicate station numbers. <table border="1"> <tr><td colspan="16">bF bE bD bC bB bA b9 b8 b7 b6 b5 b4 b3 b2 b1 b0</td></tr> <tr><td>+0</td><td>16</td><td>15</td><td>14</td><td>13</td><td>12</td><td>11</td><td>10</td><td>9</td><td>8</td><td>7</td><td>6</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td></tr> <tr><td>+1</td><td>32</td><td>31</td><td>30</td><td>29</td><td>28</td><td>27</td><td>26</td><td>25</td><td>24</td><td>23</td><td>22</td><td>21</td><td>20</td><td>19</td><td>18</td><td>17</td></tr> <tr><td>+2</td><td>48</td><td>47</td><td>46</td><td>45</td><td>44</td><td>43</td><td>42</td><td>41</td><td>40</td><td>39</td><td>38</td><td>37</td><td>36</td><td>35</td><td>34</td><td>33</td></tr> <tr><td>+3</td><td>64</td><td>63</td><td>62</td><td>61</td><td>60</td><td>59</td><td>58</td><td>57</td><td>56</td><td>55</td><td>54</td><td>53</td><td>52</td><td>51</td><td>50</td><td>49</td></tr> </table> <p>For a slave station which occupies two or more stations, specify only the start number.</p>	bF bE bD bC bB bA b9 b8 b7 b6 b5 b4 b3 b2 b1 b0																+0	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	+1	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	+2	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	+3	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49
bF bE bD bC bB bA b9 b8 b7 b6 b5 b4 b3 b2 b1 b0																																																																																									
+0	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1																																																																									
+1	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17																																																																									
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+3	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49																																																																									
Error invalid station specification data	pb_uErrorInvalidStationSpecificationData	Word [Unsigned] /Bit String [16-bit] (0..3)	0000H to FFFFH	0	Specify the error invalid station. <ul style="list-style-type: none"> • 0: Not specified • 1: Specified • 1 to 64 in the table indicate station numbers. <table border="1"> <tr><td colspan="16">bF bE bD bC bB bA b9 b8 b7 b6 b5 b4 b3 b2 b1 b0</td></tr> <tr><td>+0</td><td>16</td><td>15</td><td>14</td><td>13</td><td>12</td><td>11</td><td>10</td><td>9</td><td>8</td><td>7</td><td>6</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td></tr> <tr><td>+1</td><td>32</td><td>31</td><td>30</td><td>29</td><td>28</td><td>27</td><td>26</td><td>25</td><td>24</td><td>23</td><td>22</td><td>21</td><td>20</td><td>19</td><td>18</td><td>17</td></tr> <tr><td>+2</td><td>48</td><td>47</td><td>46</td><td>45</td><td>44</td><td>43</td><td>42</td><td>41</td><td>40</td><td>39</td><td>38</td><td>37</td><td>36</td><td>35</td><td>34</td><td>33</td></tr> <tr><td>+3</td><td>64</td><td>63</td><td>62</td><td>61</td><td>60</td><td>59</td><td>58</td><td>57</td><td>56</td><td>55</td><td>54</td><td>53</td><td>52</td><td>51</td><td>50</td><td>49</td></tr> </table> <p>For a slave station which occupies two or more stations, specify only the start number.</p> <p>If both the reserved and error invalid stations are specified for the same station, the reserved station specification will take priority.</p>	bF bE bD bC bB bA b9 b8 b7 b6 b5 b4 b3 b2 b1 b0																+0	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	+1	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	+2	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	+3	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49
bF bE bD bC bB bA b9 b8 b7 b6 b5 b4 b3 b2 b1 b0																																																																																									
+0	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1																																																																									
+1	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17																																																																									
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+3	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49																																																																									
Automatic update buffer assignment data	pb_uAutomaticRefreshBufferSize	Word [Unsigned] /Bit String [16-bit] (0..25)	0H, 80H to 1000H	80H	Specify the assigned buffer memory size (words) that is used for the transient transmission with the automatic update buffer that is performed to the local or intelligent device station. <ul style="list-style-type: none"> • 0: Not specified • 1: Specified <p>For the slave stations that have been set as intelligent device stations in the slave station setting data, set them in ascending order of station numbers.</p> <ul style="list-style-type: none"> +0: Automatic update buffer size (1st) +1: Automatic update buffer size (2nd) +2: Automatic update buffer size (3rd) : +23: Automatic update buffer size (24th) +24: Automatic update buffer size (25th) +25: Automatic update buffer size (26th) <p>Assuming that the total size of the automatic update buffer is within 1000H (4096) words, specify the required size for each intelligent device station.</p>																																																																																				

INSTRUCTION INDEX

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MEMO

REVISIONS

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

Revision date	*Manual number	Description
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July 2014	BCN-P5999-0380-B	Partial correction
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