

# CC-Link **IE TSN**

Open Field Network

Control & Communication System Profile (CSP+)  
Creation Guidelines

CC-Link IE TSN (Application)



CC-Link 协会

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## Revisions

Date	Sub number	Description
December 2020		First edition
April 2021	A	Errors in writing were corrected in Table 4.1-1 No.44 and No.47, Table 4.1-1 *3, Section 4.4 (1), Figure 4.5-1, Table 4.5-2, and Table 5.5-3. Descriptions were added to Section 3.1, Section 4.1, Section 5.4, and Section 5.5.

## 1. INTRODUCTION

This document describes guidelines for CSP+ description and utility software based on the Control & Communication System Profile Specification (BAP-C2008ENG-001) for designers. There are multiple parts (such as DEVICE\_INFO part, COMM\_IF\_INFO part, and others) to configure CSP+. The document describes where to display items of each element described in each part and how to use the items when the items are not displayed on the utility software. When creating CSP+, the document provides which part of CSP+ should be described to use the utility software function. In addition, designers can check if the created CSP+ is applied to the utility software windows by checking the CSP+ description and the actual display on utility software at the test.

### **[Remarks]**

The CSP+ described in this document uses an example of the CC-Link IE TSN analog-digital converter module (model name: NZ2GN2B-60AD4) (manufactured by Mitsubishi Electric). A window display of utility software described in this document indicates that of GX Works3 manufactured by Mitsubishi Electric.

Implementation of utility software described in this document is an example. The application of information described in the CSP+ is not limited to the one described in this document.



## 1.1 Description Details

Chapters correspond to CSP+ sections and sections correspond to CSP+ parts in this document. Each section has the following components (1) to (4).

### (1) Specifications of each part

Elements/items and descriptions to be described in each part are listed.

**Table 1.1-1 List of Elements which Configure the DEVICE\_INFO Part**

No.	Element	Description	Required/Optional
1	VendorName	Describes the name of the vendor that manufactured the module.	Required
2	VendorCode	Describes the code of vendor that manufactured the module. The membership number (fifth to eighth digits) of the CC-Link Partner Association is described.	Required
4	ProductID	Describes the product ID of the module. The ID managed by the vendor that manufactured the module is	Optional
26	Weight		
27	Price		Optional
28	UI_ATTRIBUTE	to be specified in UI_ATTRIBUTE. ***.	Optional

Items in the CSP+ Specification are numbered.  
The numbers correspond to those in the square red boxes in the figures of (2), (3), and (4).

### (2) Example of CSP+ descriptions

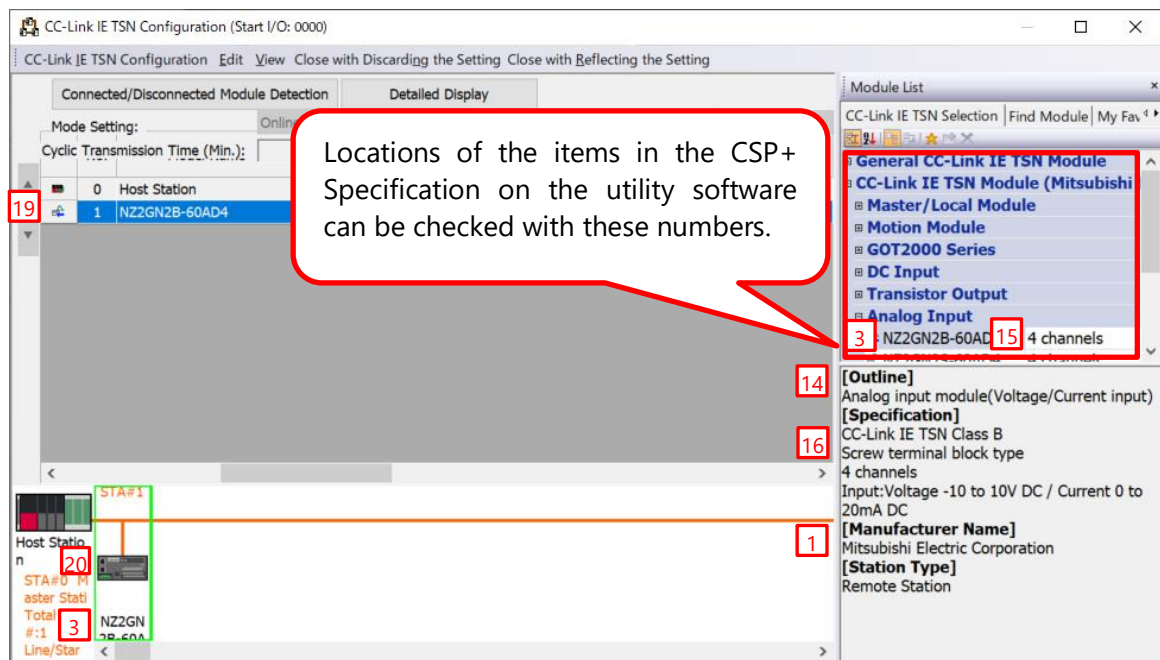
Display examples of each part when CSP+ for the analog-digital converter module (NZ2GN2B-60AD4) is opened in CSP+ profile creation support tool are shown.

DeviceInformation x						
	LABEL	LABEL2	CATEGORY	NAME	DATATYPE	DATA
1	VendorName	Vendor name	COMMON	Vendor name	STRING U(64)	Mitsubishi Electric Corporation
2	VendorCode	Vendor code	COMMON	Vendor code	WORD	0x0000
3	DeviceModel	Device model	COMMON	Device model	STRING(48)	NZ2GN2B-60AD4
4	ProductID	ProductID	COMMON	Product ID	STRING(256)	1342177283

Locations of the items in the CSP+ Specification can be checked with these numbers.

## (3) Display example on utility software

A display example on GX Works3 when CSP+ for the analog-digital converter module (NZ2GN2B-60AD4) is used is shown below.



## (4) Elements and items not being used on the utility software window despite being described in the CSP+ description specifications

Elements and items that are not used for displaying the utility software window are listed.

4	ProductID	Used to check whether the ProductID matches the model code acquired from the actual device during automatic detection and scanning. Example: L26CPU-BT 0x40000548 LJ61BT11 0x00000001 RJ71EN71 0x00000029 • When an error occurs If the number is incorrect, the utility software recognizes a module as a different one.
5	DeviceTypeID	Describes the code of the device type list determined by the CC-Link Partner Association. (Example: 0x20 for an inverter)
9	VersionPolicyType	Describes the price with a unit.

## Definitions of terminology and figures



A black word balloon describes an explanation of an item.



A blue word balloon describes a point of display and processing of CSP+ and the utility software.

## 2. FILE SECTION

The FILE section consists of only one FILE\_INFO part.

### 2.1 FILE\_INFO Part

The FILE\_INFO part describes the file information (such as file updated date) of the CSP+ file.

- (1) **Control & Communication System Profile Specification (BAP-C2008ENG-001) - 5.1.1 FILE\_INFO part**  
Table 2.1-1 lists the elements which configure the FILE\_INFO part.

**Table 2.1-1 List of Elements which Configure the FILE\_INFO Part**

No.	Element	Description	Required/Optional
1	CreateDate	Describes the date the CSP+ file was created.	Required
2	CreateTime	Describes the time the CSP+ file was created.	Required
3	ModDate	Describes the date last modified.	Required
4	ModTime	Describes the time last modified.	Required
5	Language	Describes the language in which the CSP+ file is described.	Required
6	FileVersion	Describes the version of the CSP+ information for the target module.	Required
7	CCLinkFamilyProfileVersion	Describes the version of CSP+ description specifications.	Required

- (2) **CSP+ descriptions**

Figure 2.1-1 shows a display example of the FILE\_INFO part when the CSP+ for the analog-digital converter module (NZ2GN2B-60AD4) is opened in CSP+ profile creation support tool.

LABEL	LABEL2	CATEGORY	NAME	DATATYPE	DATA	REMARK
1 CreateDate	File creation day	COMMON	File creation day	STRING(10)	2019/09/20	
2 CreateTime	File creation time	COMMON	File creation time	STRING(8)	12:54:08	
3 ModDate	Last update date	COMMON	Last update date	STRING(10)	2019/09/20	
4 ModTime	Last update time	COMMON	Last update time	STRING(8)	12:54:08	
5 Language	Supported language	COMMON	Supported language	STRING(12)	en	
6 FileVersion	File version	COMMON	File version	STRING(32)	1.1	
7 CCLinkFamilyProfileVersion	CSP PLUS specification version	COMMON	CSP+ specification version	STRING(32)	3.0	

**Figure 2.1-1 Display Example When CSP+ Profile Creation Support Tool is Used (FILE\_INFO)**

- (3) **Utility software**

Any elements that configure the FILE\_INFO part are not displayed on the utility software.

- (4) **Elements not being used on the utility software window despite being described in the CSP+ description specifications**

Table 2.1-2 lists the elements not being used on the utility software window despite being described in the CSP+ description specifications.

**Table 2.1-2 Elements Not Being Used on the Utility Software Window (FILE\_INFO)**

No.	Element	Application	Required/Optional
1	CreateDate	Reference information. This element is displayed only in CSP+ profile creation support tool.	Required
2	CreateTime	Reference information. This element is displayed only in CSP+ profile creation support tool.	Required
3	ModDate	Reference information. This element is displayed only in CSP+ profile creation support tool.	Required
4	ModTime	Reference information. This element is displayed only in CSP+ profile creation support tool.	Required
5	Language	Displays the corresponding language of CSP+ by comparing the language of the utility software and the string described in this element.	Required
6	FileVersion	Utility software uses CSP+ with the latest file version.	Required
7	CCLinkFamilyProfileVersion	Utility software that does not support the description specification version of CSP+ described in this element cannot use the CSP+.	Required

### 3. DEVICE SECTION

The DEVICE section consists of only one DEVICE\_INFO part.

#### 3.1 DEVICE\_INFO Part

The DEVICE\_INFO part describes the product identification information and the information related to the product specifications.

#### (1) Control & Communication System Profile Specification (BAP-C2008ENG-001) - 5.2.1 DEVICE\_INFO part

Table 3.1-1 lists the elements which configure the DEVICE\_INFO part.

**Table 3.1-1 List of Elements which Configure the DEVICE\_INFO Part**

No.	Element	Description	Required/ Optional
1	VendorName	Describes the name of the vendor that manufactured the module.	Required
2	VendorCode	Describes the code of vendor that manufactured the module. The membership number (fifth to eighth digits) of the CC-Link Partner Association is described.	Required
3	DeviceModel	Describes the model of the module.	Required
4	ProductID	Describes the product ID of the module managed by each vendor.	Required
5	DeviceTypeID	Describes the ID of the module type.	*1
6	DeviceTypeDetail	Describes the specific device type.	*1
7	Version	Describes the device version of the module.	Required
8	VersionDisplayFlg	Describes whether to show/hide the device version to/from the user.	Required
9	VersionPolicyType	Describes the policy of the relationship between the actual device version and the device version described in the CSP+ file when the actual device is accessed using the CSP+ file.	Required
10	DisplayVersionValue	Describes the value of the device version to be displayed when the value (Version) of the device version acquired from the actual device differs from the value of the version displayed to the user on the utility software.	Optional
11	VersionComment	Describes a comment related to the device version.	Optional
12	DeviceConfigurationID	Describes the identifier for the individual device configuration of the device having a device configuration that can be changed. The device configuration ID must be unique in the user environment.	Optional
13	DeviceConfigurationComment	Describes a comment related to the device configuration ID to identify the CSP+ file using the ID.	Optional
14	ReferenceURL	Describes a URL if the module information is disclosed on the website.	Optional
15	URLInfo	Describes a description of the information indicated by the reference URL.	Optional
16	Outline	Describes the general specifications of the module.	Optional
17	Feature	Describes the features of the module.	Optional
18	SpecList	Describes the module specifications using a set of strings.	Optional
19	PowerSupplyVoltage	Describes the power supply voltage in volts (V).	Optional
20	ConsumptionCurrent	Describes the current consumption in milliamperes (mA).	Optional
21	IconFileName	Describes the icon file name with the extension (.ico) when displaying the module as an icon on the utility software.	Optional
22	GraphicsFileName	Describes the graphic file name with the extension (.bmp, .png, .jpg, or .gif) when displaying the module on the utility software.	Optional
23	Height	Describes the height of the external dimensions with a unit.	Optional
24	Width	Describes the width of the external dimensions with a unit.	Optional
25	Depth	Describes the depth of the external dimensions with a unit.	Optional

No.	Element	Description	Required/ Optional
26	Weight	Describes the weight with a unit.	Optional
27	Price	Describes the price with a unit.	Optional
28	UI_ATTRIBUTE_Window**	Describes the name of the Window to be specified in UI_ATTRIBUTE. The Window number is described in "***".	Optional
29	DedicatedToolFlg	Describes if a supported dedicated tool exists.	Optional
30	DedicatedToolName	Describes the supported dedicated tool name.	*2
31	InstallRegistryKeyName	Describes the registry key name only when the supported dedicated tool is installed.	*2
32	InstallRegistryValueName	Describes the registry value name only when the supported dedicated tool is installed.	*3
33	ExePathRegistryKeyName	Describes the key name of the registry where the path information of the execution file (.exe) for the supported dedicated tool is stored.	*2
34	ExePathRegistryValueName	Describes the value name of the registry where the path information of the execution file (.exe) for the supported dedicated tool is stored.	*2

\*1: Omitting both the DeviceTypeID element and the DeviceTypeDetail element is prohibited. Either of these elements must be described. When both of the elements are described, the DeviceTypeDetail element takes precedence.

\*2: Required when the DedicatedToolFlg element is described and its DATA item value is 1. Otherwise, description is prohibited.

\*3: Optional when the DedicatedToolFlg element is described and its DATA item value is 1. Otherwise, description is prohibited.

(2) Control & Communication System Profile Specification (BAP-C2008ENG-001) - 5.5.10.5.2.1  
Description details of DEVICE\_INFO part

Table 3.1-2 lists the elements which configure the DEVICE\_INFO part of the main module.

Table 3.1-2 List of Elements which Configure the DEVICE\_INFO Part of the Main Module

No.	Element	Description	Required/ Optional
1	VendorName	Describes the name of the vendor that manufactured the module.	Required
2	VendorCode	Describes the code of vendor that manufactured the module. The membership number (fifth to eighth digits) of the CC-Link Partner Association is described.	Required
3	DeviceModel	Describes the model of the module.	Required
4	ProductID	Describes the product ID of the module managed by each vendor.	Required
5	DeviceTypeID	Describes the ID of the module type.	*1
6	DeviceTypeDetail	Describes the specific device type.	*1
7	Version	Describes the device version of the module.	Required
8	VersionDisplayFlg	Describes whether to show/hide the device version to/from the user.	Required
9	VersionPolicyType	Describes the policy of the relationship between the actual device version and the device version described in the CSP+ file when the actual device is accessed using the CSP+ file.	Required
10	DisplayVersionValue	Describes the value of the device version to be displayed when the value (Version) of the device version acquired from the actual device differs from the value of the version displayed to the user on the utility software.	Optional
11	VersionComment	Describes a comment related to the device version.	Optional
12	DeviceConfigurationID	Describes the identifier for the individual device configuration of the device having a device configuration that can be changed. The device configuration ID must be unique in the user environment.	Optional
13	DeviceConfigurationComment	Describes a comment related to the device configuration ID to identify the CSP+ file using the ID.	Optional
14	ReferenceURL	Describes a URL if the module information is disclosed on the website.	Optional
15	URLInfo	Describes a description of the information indicated by the reference URL.	Optional
16	Outline	Describes the general specifications of the module.	Optional
17	Feature	Describes the features of the module.	Optional
18	SpecList	Describes the module specifications using a set of strings.	Optional
19	PowerSupplyVoltage	Describes the power supply voltage in volts (V).	Optional
20	ConsumptionCurrent	Describes the current consumption in milliamperes (mA).	Optional
21	IconFileName	Describes the icon file name with the extension (.ico) when displaying the module as an icon on the utility software.	Optional
22	GraphicsFileName	Describes the graphic file name with the extension (.bmp, .png, .jpg, or .gif) when displaying the module on the utility software.	Optional
23	Height	Describes the height of the external dimensions with a unit.	Optional
24	Width	Describes the width of the external dimensions with a unit.	Optional
25	Depth	Describes the depth of the external dimensions with a unit.	Optional
26	Weight	Describes the weight with a unit.	Optional
27	Price	Describes the price with a unit.	Optional
28	UI_ATTRIBUTE_Window**	Describes the name of the Window to be specified in UI_ATTRIBUTE. The Window number is described in ""**"".	Optional
29	DedicatedToolFlg	Describes if a supported dedicated tool exists.	Optional

No.	Element	Description	Required/ Optional
30	DedicatedToolName	Describes the supported dedicated tool name.	*2
31	InstallRegistryKeyName	Describes the registry key name only when the supported dedicated tool is installed.	*2
32	InstallRegistryValueName	Describes the registry value name only when the supported dedicated tool is installed.	*3
33	ExePathRegistryKeyName	Describes the key name of the registry where the path information of the execution file (.exe) for the supported dedicated tool is stored.	*2
34	ExePathRegistryValueName	Describes the value name of the registry where the path information of the execution file (.exe) for the supported dedicated tool is stored.	*2
35	EXTExtensionIFTypeID	Describes the type of extension modules to be connected.	Required
36	EXTExtensionMax	Describes the maximum number of extension modules to be connected.	Required
37	EXTExtensionModuleType	Describes the type of extension modules to be connected.	Optional
38	EXTCyclicPDUExtensionFlg	Describes if extension modules supporting cyclic transmission PDUs can be connected.	Required

\*1: Omitting both the DeviceTypeID element and the DeviceTypeDetail element is prohibited. Either of these elements must be described. When both of the elements are described, the DeviceTypeDetail element takes precedence.

\*2: Required when the DedicatedToolFlg element is described and its DATA item value is 1. Otherwise, description is prohibited.

\*3: Optional when the DedicatedToolFlg element is described and its DATA item value is 1. Otherwise, description is prohibited.

### (3) Control & Communication System Profile Specification (BAP-C2008ENG-001) - 5.5.10.5.3.2 Description details of DEVICE\_INFO part

Table 3.1-3 lists the elements which configure the DEVICE\_INFO part of the extension module.

**Table 3.1-3 List of Elements which Configure the DEVICE\_INFO Part of the Extension Module**

No.	Element	Description	Required/ Optional
1	VendorName	Describes the name of the vendor that manufactured the module.	Required
2	VendorCode	Describes the code of vendor that manufactured the module. The membership number (fifth to eighth digits) of the CC-Link Partner Association is described.	Required
3	DeviceModel	Describes the model of the module.	Required
4	ProductID	Describes the product ID of the module managed by each vendor.	Required
5	DeviceTypeID	Describes the ID of the module type.	*1
6	DeviceTypeDetail	Describes the specific device type.	*1
7	Version	Describes the device version of the module.	Required
8	VersionDisplayFlg	Describes whether to show/hide the device version to/from the user.	Required
9	VersionPolicyType	Describes the policy of the relationship between the actual device version and the device version described in the CSP+ file when the actual device is accessed using the CSP+ file.	Required
10	DisplayVersionValue	Describes the value of the device version to be displayed when the value (Version) of the device version acquired from the actual device differs from the value of the version displayed to the user on the utility software.	Optional
11	VersionComment	Describes a comment related to the device version.	Optional
12	DeviceConfigurationID	Describes the identifier for the individual device configuration of the device having a device configuration that can be changed. The device configuration ID must be unique in the user environment.	Optional

No.	Element	Description	Required/ Optional
13	DeviceConfigurationComment	Describes a comment related to the device configuration ID to identify the CSP+ file using the ID.	Optional
14	ReferenceURL	Describes a URL if the module information is disclosed on the website.	Optional
15	URLInfo	Describes a description of the information indicated by the reference URL.	Optional
16	Outline	Describes the general specifications of the module.	Optional
17	Feature	Describes the features of the module.	Optional
18	SpecList	Describes the module specifications using a set of strings.	Optional
19	PowerSupplyVoltage	Describes the power supply voltage in volts (V).	Optional
20	ConsumptionCurrent	Describes the current consumption in milliamperes (mA).	Optional
21	IconFileName	Describes the icon file name with the extension (.ico) when displaying the module as an icon on the utility software.	Optional
22	GraphicsFileName	Describes the graphic file name with the extension (.bmp, .png, .jpg, or .gif) when displaying the module on the utility software.	Optional
23	Height	Describes the height of the external dimensions with a unit.	Optional
24	Width	Describes the width of the external dimensions with a unit.	Optional
25	Depth	Describes the depth of the external dimensions with a unit.	Optional
26	Weight	Describes the weight with a unit.	Optional
27	Price	Describes the price with a unit.	Optional
28	UI_ATTRIBUTE_Window**	Describes the name of the Window to be specified in UI_ATTRIBUTE. The Window number is described in "***".	Optional
29	CyclicPDUFlg	Describes the cyclic transmission PDU availability.	Required

\*1: Omitting both the DeviceTypeID element and the DeviceTypeDetail element is prohibited. Either of these elements must be described. When both of the elements are described, the DeviceTypeDetail element takes precedence.



## (4) CSP+ descriptions

Figure 3.1-1 shows a display example of the DEVICE\_INFO part when the CSP+ for the analog-digital converter module (NZ2GN2B-60AD4) is opened in CSP+ profile creation support tool.

DeviceInformation x						
LABEL	LABEL2	CATEGORY	NAME	DATATYPE	DATA	REMARK
1	VendorName	COMMON	Vendor name	STRING U(64)	Mitsubishi Electric Corporation	1
2	VendorCode	COMMON	Vendor code	WORD	0x0000	2
3	DeviceModel	COMMON	Device model	STRING(48)	NZ2GN2B-60AD4	3
4	ProductID	COMMON	Product ID	STRING(256)	1342177283	4
5	DeviceTypeID	COMMON	Device type ID	WORD	0x0004	5
6	DeviceTypeDetail	COMMON	Device type detail	STRING U(256)	Analog Input	6
7	Version	COMMON	Device version	UINT16	1	7
8	VersionDisplayFlag	COMMON	Device version display flag	BOOL	1	8
9	VersionPolicyType	COMMON	Device version policy type	UINT16	1	9
10	VersionComment	COMMON	Comment for device version	STRING U(256)	Profile ver.01E	10
11	Outline	COMMON	Outline specification	STRING U(256)	Analog input module(Voltage/Current input)	11
12	Feature	COMMON	Feature	STRING U(256)	4 channels	12
13	SpecList	COMMON	Specification list	STRING_U(256)()	CC-Link IE TSN Class B, Screw terminal block type, 4 channels, Input Voltage -10 to 10V DC / Current 0 to 20mA DC	13
14	IconFileName	COMMON	Icon file name	STRING(52)	CCLi0401.ico	14
15	GraphicsFileName	COMMON	Image file name	STRING(52)	NZ2GN2B-60AD4 64x32bmp	15

Figure 3.1-1 Display Example When CSP+ Profile Creation Support Tool is Used (DEVICE\_INFO)

Figure 3.1-2 shows a display example of the DEVICE\_INFO part of the extension module.

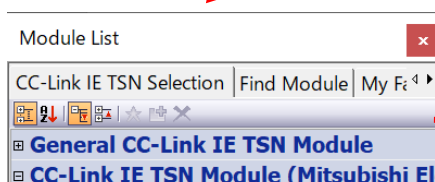
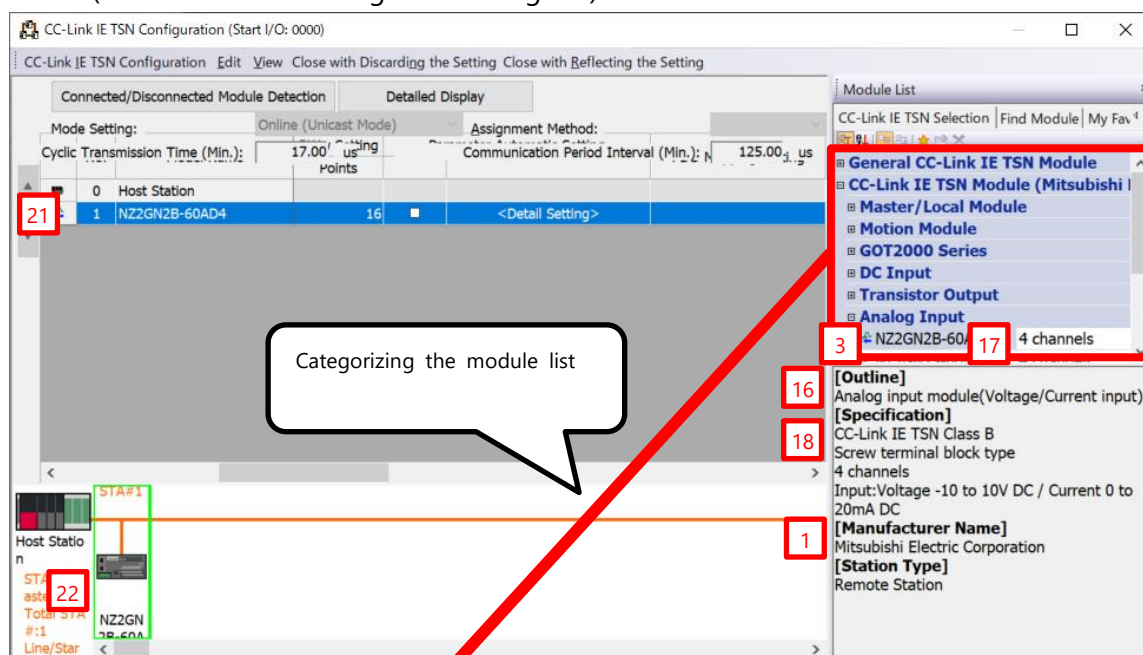
Figure 3-1-2 shows a display example of the DEVICE INFO part of the extension module.

DeviceInfo x						
	LABEL2	CATEGORY	NAME	DATATYPE	DATA	REMARK
1	Vendor Name	COMMON	Vendor Name	STRING U(64)	Mitsubishi Electric	1
2	Vendor Code	COMMON	Vendor Code	WORD	0x0000	2
3	Model	COMMON	Model	STRING(48)	Extension module	3
4	Product ID	COMMON	Product ID	STRING(256)	1234556890	4
5	Device Type ID	COMMON	Device Type ID	WORD	0x0003	5
6	Device Type Details	COMMON	Device Type (Details)	STRING U(256)	Extension module	6
7	Machine Version	COMMON	Machine Version	UINT16	1	7
8	Machine Version Display Flag	COMMON	Machine Version Display Flag	BOOL	1	8
9	Machine Version Policy	COMMON	Machine Version Policy	UINT16	0	9
10	Machine Version Display Value	COMMON	Machine Version (Display Value)	STRING(32)	0001	10
11	Version comment	COMMON	Version comment	STRING U(256)	Profile ver.001	11
12	Device Configuration ID	COMMON	Device Configuration ID	STRING(32)	Extension module ID	12
13	Device Configuration Comment	COMMON	Device Configuration Comment	STRING U(64)	Extension module ID	13
14	Outline Specification	COMMON	Outline Specification	STRING U(256)	Modules that extend to basic module	14
15	Feature	COMMON	Feature	STRING U(256)	Expandable up to 64 modules	15
16	Specification_List	COMMON	Specification List	STRING_U(256)()	Extension module, Expandable number: Max 64 modules	16
17	Icon File Name	COMMON	Icon File Name	STRING(52)	IconFile.ico	17
18	Graphics File Name	COMMON	Graphics File Name	STRING(52)	GraphicsFile.png	18
19	Cyclic trans PDU availability	COMMON ExType	Cyclic transmission PDU availability flag	BOOL	0	19

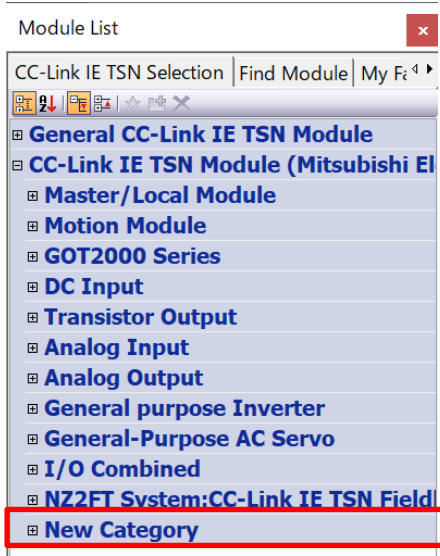
Figure 3.1-2 Display Example of the DEVICE\_INFO Part of the Extension Module

## (5) Utility software - (CC-Link IE TSN configuration diagram)

The following shows how the descriptions in the CSP+ for the analog-digital converter module (NZ2GN2B-60AD4) are displayed on the utility software. A display example of utility software (CC-Link IE TSN configuration diagram) is shown below.

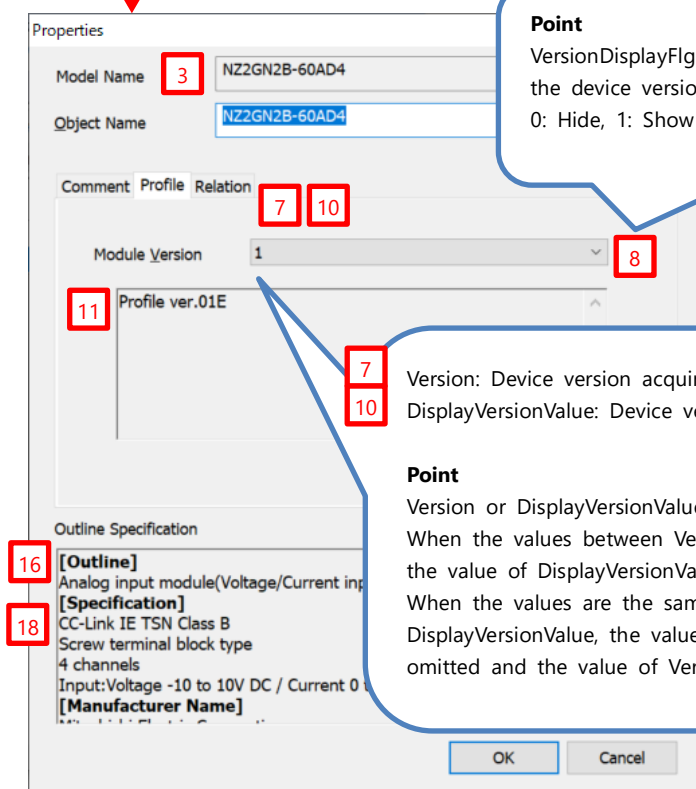
**Point**

The categories are listed in ascending numerical order of VendorCode.

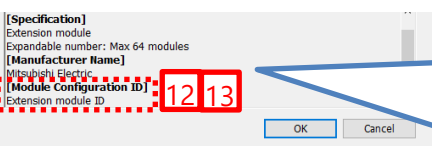
**Point**

DeviceTypeDetail is categorized in the second hierarchy level of the module list. The categories are listed in the order of registration in the engineering tool.

For example, when the description of DeviceTypeDetail in the analog input profile is changed from "Analog Input" to "Add new category", the displayed name on the tree is changed.

**Point**

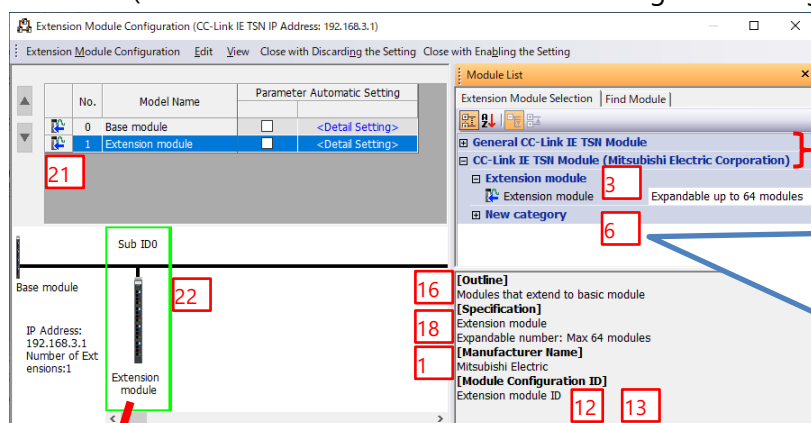
VersionDisplayFlg describes whether to show/hide the device version to/from the user.  
0: Hide, 1: Show

**Point**

The description of DeviceConfigurationComment is displayed.  
When DeviceConfigurationComment is not described, the description of DeviceConfigurationID is displayed.  
When both DeviceConfigurationComment and DeviceConfigurationID are not described, no data will be displayed.  
(Since both DeviceConfigurationComment and DeviceConfigurationID are not described in the CSP+ file of the NZ2GN2B-60AD4, the device configuration ID is not displayed.)

### (6) Utility software - (CC-Link IE TSN extension module configuration diagram)

The following shows how the descriptions in the CSP+ for the extension module are displayed on the utility software. A display example of the utility software (CC-Link IE TSN extension module configuration diagram) is shown below.



#### Point

The categories are listed in ascending numerical order of VendorCode.

#### Point

DeviceTypeDetail is categorized in the second hierarchy level of the module list. The categories are listed in the order of registration in the engineering tool.

For example, when the description of DeviceTypeDetail in the extension module profile is changed from "Extension module" to "Add new category", the displayed name on the tree is changed.

#### Point

The description of DeviceConfigurationComment is displayed. When DeviceConfigurationComment is not described, the description of DeviceConfigurationID is displayed. When both DeviceConfigurationComment and DeviceConfigurationID are not described, no data will be displayed.

#### Point

Version or DisplayVersionValue is displayed. When the values between Version and DisplayVersionValue differ, the value of DisplayVersionValue is displayed. When the values are the same between Version and DisplayVersionValue, the value of DisplayVersionValue can be omitted and the value of Version is displayed.

#### Point

When VersionDisplayFlg is 1, the device version is shown. When VersionDisplayFlg is 0, the device version is hidden.

## (7) Elements not being used on the utility software window despite being described in the CSP+ description specifications

Table 3.1-4 lists the elements not being used on the utility software window despite being described in the CSP+ description specifications.

Table 3.1-4 Elements Not Being Used on Utility Software Window (DEVICE\_INFO)

No.	Element	Application	Required/ Optional
4	ProductID	Used to check whether the ProductID matches the model code acquired from the actual device during automatic detection and scanning. Example: L26CPU-BT 0x40000548 LJ61BT11 0x00000001 RJ71EN71 0x00000029	Optional
5	DeviceTypeID	Describes the code of the device type list determined by the CC-Link Partner Association. (Example: 0x20 for an inverter) For the code assignment, refer to the CC-Link Partner Association website. If the device type does not fall under any of the categories, submit an application to the CC-Link Partner Association to add a code. Please contact the CC-Link Partner Association. A string corresponding to the code described in DeviceTypeID is displayed when DeviceTypeDetail is not described.	*1
9	VersionPolicyType	Describes the policy of the device version between the module and the CSP+ file. The device version to be used is determined based on this value. For the meanings of each value and modules to be used, refer to the following. Control & Communication System Profile Specification (BAP-C2008ENG-001) - 5.2.1 DEVICE_INFO part - (2) Device version (Version element) - (f) Device version comparison policy for module and CSP+ file (VersionPolicyType element)	Required
12	DeviceConfigurationID	For future expansion	Optional
13	DeviceConfigurationComment	For future expansion	Optional
19	PowerSupplyVoltage	Not used for the CC-Link IE TSN profile.	Optional
20	ConsumptionCurrent	Not used for the CC-Link IE TSN profile.	Optional
23	Height	Reference information. This element is displayed only in CSP+ profile creation support tool.	Optional
24	Width	Reference information. This element is displayed only in CSP+ profile creation support tool.	Optional
25	Depth	Reference information. This element is displayed only in CSP+ profile creation support tool.	Optional
26	Weight	Reference information. This element is displayed only in CSP+ profile creation support tool.	Optional
27	Price	Reference information. This element is displayed only in CSP+ profile creation support tool.	Optional
28	UI_ATTRIBUTE_Window**	For future expansion	Optional
29	DedicatedToolFlg	Uses for utility software to determine if a dedicated tool exists.	Optional
30	DedicatedToolName	Describes the dedicated tool name.	*2
31	InstallRegistryKeyName	Describes the registry key name to InstallRegistryKeyName and the registry value name to InstallRegistryValueName only when the dedicated tool is installed.	*2
32	InstallRegistryValueName		*3
33	ExePathRegistryKeyName	Acquires the execution file path of the dedicated tool from the registry where this element is described at start-up of the dedicated tool in the utility software.	*2
34	ExePathRegistryValueName		*2

\*1: Omitting both the DeviceTypeID element and the DeviceTypeDetail element is prohibited. Either of these elements must be described. When both of the elements are described, the

DeviceTypeDetail element takes precedence.

- \*2: Required when the DedicatedToolFlg element is described and its DATA item value is 1. Otherwise, description is prohibited.
- \*3: Optional when the DedicatedToolFlg element is described and its DATA item value is 1. Otherwise, description is prohibited.

(8) Elements not being used on the utility software window despite being described in the CSP+ description specifications (main module)

Table 3.1-5 lists the elements not being used on the utility software window despite being described in the CSP+ description specifications (main module).

**Table 3.1-5 Elements Not Being Used on Utility Software Window (DEVICE\_INFO of Main Module)**

No.	Element	Application	Required/ Optional
4	ProductID	Used to check whether the ProductID matches the model code acquired from the actual device during automatic detection and scanning. Example: L26CPU-BT 0x40000548 LJ61BT11 0x00000001 RJ71EN71 0x00000029	Optional
5	DeviceTypeID	Describes the code of the device type list determined by the CC-Link Partner Association. (Example: 0x20 for an inverter) For the code assignment, refer to the CC-Link Partner Association website. If the device type does not fall under any of the categories, submit an application to the CC-Link Partner Association to add a code. Please contact the CC-Link Partner Association. A string corresponding to the code described in DeviceTypeID is displayed when DeviceTypeDetail is not described.	*1
9	VersionPolicyType	Describes the policy of the device version between the module and the CSP+ file. The device version to be used is determined based on this value. For the meanings of each value and modules to be used, refer to the following. Control & Communication System Profile Specification (BAP-C2008ENG-001) - 5.2.1 DEVICE_INFO part - (2) Device version (Version element) - (f) Device version comparison policy for module and CSP+ file (VersionPolicyType element)	Required
12	DeviceConfigurationID	For future expansion	Optional
13	DeviceConfigurationComment	For future expansion	Optional
19	PowerSupplyVoltage	Not used for the CC-Link IE TSN profile.	Optional
20	ConsumptionCurrent	Not used for the CC-Link IE TSN profile.	Optional
23	Height	Reference information. This element is displayed only in CSP+ profile creation support tool.	Optional
24	Width	Reference information. This element is displayed only in CSP+ profile creation support tool.	Optional
25	Depth	Reference information. This element is displayed only in CSP+ profile creation support tool.	Optional
26	Weight	Reference information. This element is displayed only in CSP+ profile creation support tool.	Optional
27	Price	Reference information. This element is displayed only in CSP+ profile creation support tool.	Optional
28	UI_ATTRIBUTE_Window**	For future expansion	Optional
29	DedicatedToolFlg	Uses for utility software to determine if a dedicated tool exists.	Optional
30	DedicatedToolName	Describes the dedicated tool name.	*2
31	InstallRegistryKeyName	Describes the registry key name to InstallRegistryKeyName and the registry value name to InstallRegistryValueName only when the dedicated tool is installed.	*2
32	InstallRegistryValueName		*3
33	ExePathRegistryKeyName	Acquires the execution file path of the dedicated tool from the registry where this element is described at start-up of the dedicated tool in the utility software.	*2
34	ExePathRegistryValueName		*2

No.	Element	Application	Required/ Optional
35	EXTExtensionIFTypeID	Used for the utility software to display extension modules that can be connected to the main module.  The utility software displays the extension modules only when the description of EXTExtensionIFTypeID of the main module matches the description of CommIFTypeID of the extension module.	Required
36	EXTExtensionMax	Used for the utility software to check the number of extension modules that can be connected to the main module.	Required
37	EXTExtensionModuleType	Used for the utility software to display extension modules that can be connected to the main module.  Based on the description here, the utility software further determines whether the extension modules are connectable or not after the description of EXTExtensionIFTypeID of the main module matches the description of CommIFTypeID of the extension module.	Optional
38	EXTCyclicPDUExtensionFlg	Used for the utility software to display extension modules that can be connected to the main module.  The utility software displays the extension modules only when the same string is described in EXTCyclicPDUExtensionFlg of the main module and EXTExtensionModuleType of the extension module.	Required

- \*1: Omitting both the DeviceTypeID element and the DeviceTypeDetail element is prohibited. Either of these elements must be described. When both of the elements are described, the DeviceTypeDetail element takes precedence.
- \*2: Required when the DedicatedToolFlg element is described and its DATA item value is 1. Otherwise, description is prohibited.
- \*3: Optional when the DedicatedToolFlg element is described and its DATA item value is 1. Otherwise, description is prohibited.



(9) Elements not being used on the utility software window despite being described in the CSP+ description specifications (extension module)

Table 3.1-6 lists the elements not being used on the utility software window despite being described in the CSP+ description specifications (extension module).

**Table 3.1-6 Elements Not Being Used on Utility Software Window (DEVICE\_INFO of Extension Module)**

No.	Element	Application	Required/ Optional
4	ProductID	Used to check whether the ProductID matches the model code acquired from the actual device during automatic detection and scanning. Example: L26CPU-BT 0x40000548 LJ61BT11 0x00000001 RJ71EN71 0x00000029	Optional
5	DeviceTypeID	Describes the code of the device type list determined by the CC-Link Partner Association. (Example: 0x20 for an inverter) For the code assignment, refer to the CC-Link Partner Association website. If the device type does not fall under any of the categories, submit an application to the CC-Link Partner Association to add a code. Please contact the CC-Link Partner Association. A string corresponding to the code described in DeviceTypeID is displayed when DeviceTypeDetail is not described.	*1
9	VersionPolicyType	Describes the policy of the device version between the module and the CSP+ file. The device version to be used is determined based on this value. For the meanings of each value and modules to be used, refer to the following. Control & Communication System Profile Specification (BAP-C2008ENG-001) - 5.2.1 DEVICE_INFO part - (2) Device version (Version element) - (f) Device version comparison policy for module and CSP+ file - (VersionPolicyType element)	Required
23	Height	Reference information. This element is displayed only in CSP+ profile creation support tool.	Optional
24	Width	Reference information. This element is displayed only in CSP+ profile creation support tool.	Optional
25	Depth	Reference information. This element is displayed only in CSP+ profile creation support tool.	Optional
26	Weight	Reference information. This element is displayed only in CSP+ profile creation support tool.	Optional
27	Price	Reference information. This element is displayed only in CSP+ profile creation support tool.	Optional
28	UI_ATTRIBUTE_Window**	For future expansion	Optional
29	CyclicPDUFlg	For future expansion	Required

\*1: Omitting both the DeviceTypeID element and the DeviceTypeDetail element is prohibited. Either of these elements must be described. When both of the elements are described, the DeviceTypeDetail element takes precedence.

4. COMM IF SECTION

The COMM\_IF section defines the information of the communication functions and consists of multiple parts as shown in Figure 4-1.

COMM_IF section	
COMM_IF_INFO part	Describes the identification information and communication specifications of the communication interface.
COMM_IF_INPUT part	Describes the input information of the communication interface.
COMM_IF_OUTPUT part	Describes the output information of the communication interface.
COMM_IF_PARAMETER part	Describes the parameter information of the communication interface.
COMM_IF_COMMAND part	Describes the commands to be executed by the communication interface.
METHOD part	Describes the information related to the commands issued from the communication interface and the parameter settings.
MESSAGE part	Describes the information required for the communication processing to be executed, specifying a data format.
STRUCT part	Describes the structure of the inputs and outputs of multiple elements.
ENUM part	Describes the options for values and return values to be set for the element.
COMMAND_ARGUMENT part	Describes the argument information of COMM_IF_COMMAND.

Figure 4-1 Structure of the COMM\_IF Section

## 4.1 COMM\_IF\_INFO Part

The COMM\_IF\_INFO part describes the identification information and communication specifications of the communication interface.

### (1) Control & Communication System Profile Specification (BAP-C2008ENG-001) - 5.3.1 COMM\_IF\_INFO part

Table 4.1-1 lists the elements which configure the COMM\_IF\_INFO part.

**Table 4.1-1 List of Elements which Configure the COMM\_IF\_INFO Part**

	No.	Element	Description	Required/ Optional
Common part	1	VendorName	Describes the name of the vendor that manufactured the module.	Required
	2	VendorCode	Describes the code of vendor that manufactured the module. The membership number (fifth to eighth digits) of the CC-Link Partner Association is described.	Required
	3	CommIFTypeID	Describes the ID that indicates the communication interface type in a string.	Required
	4	Version	Describes the firmware version in a string.	Required
Network-dependent part	5	StationMode	Describes the station mode setting value.	Optional
	6	StationModeName	Describes the station mode name.	*1
	7	LocalFunction	Describes if the local function exists.	Optional
	8	AutoSettingHeaderType	Describes the automatic setting header type number.	Optional
	9	AutoSettingType	Describes the automatic setting type. The type is displayed only when a module that supports the slave station parameter automatic setting function is used.	Optional
	10	ModelCode	Describes the model code.	Required
	11	ModelCodeEx	Describes the extension model code.	Optional
	12	DevModel	Describes the model name.	Required
	13	CanProfileNum	Describes the CiA standard number.	Optional
	14	ObjectDictionaryFileName	Describes the object dictionary file name with the extension (.csv).	*2
	15	IEEE802_1ASFunction	Describes if the IEEE 802.1AS function exists.	Required
	16	ReceiveFunction100M	Describes if the 100 Mbps full-rate receive function exists.	Required
	17	RelayFunction100M	Describes if the 100 Mbps full-rate relay function exists.	Required
	18	ReceiveFunction1G	Describes if the 1 Gbps full-rate receive function exists.	Required
	19	RelayFunction1G	Describes if the 1 Gbps full-rate relay function exists.	Required
	20	MultiCastFunction	Describes if the broadcast/multicast function exists.	Required
	21	CertificationClass	Describes strings indicating the certification class.	Required
	22	S_B_DefaultSize	Describes the default size of the send bit data (RX) in the number of bits.	Required
	23	S_W_DefaultSize	Describes the default size of the send word data (RW <sub>r</sub> , TPDO, general send access) in the number of words.	Required
	24	R_B_DefaultSize	Describes the default size of the receive bit data (RY) in the number of bits.	Required
	25	R_W_DefaultSize	Describes the default size of the receive word data (RW <sub>w</sub> , RPDO, general receive access) in the number of words.	Required
	26	L_B_DefaultSize	Describes the default size of the link relay data (LB) in the number of bits.	Optional
	27	L_W_DefaultSize	Describes the default size of the link register data (LW) in the number of words.	Optional
	28	S_B_MaxSize	Describes the maximum size of the send bit data (RX) in the number of bits.	Required

No.	Element	Description	Required/ Optional
29	S_W_MaxSize	Describes the maximum size of the send word data (RWr, TPDO, general send access) in the number of words.	Required
30	R_B_MaxSize	Describes the maximum size of the receive bit data (RY) in the number of bits.	Required
31	R_W_MaxSize	Describes the maximum size of the receive word data (RWw, RPDO, general receive access) in the number of words.	Required
32	L_B_MaxSize	Describes the maximum size of the link relay data (LB) in the number of bits.	Optional
33	L_W_MaxSize	Describes the maximum size of the link register data (LW) in the number of words.	Optional
34	S_B_MinSize	Describes the minimum size of the send bit data (RX) in the number of bits.	Optional
35	S_W_MinSize	Describes the minimum size of the send word data (RWr, TPDO, general send access) in the number of words.	Optional
36	R_B_MinSize	Describes the minimum size of the receive bit data (RY) in the number of bits.	Optional
37	R_W_MinSize	Describes the minimum size of the receive word data (RWw, RPDO, general receive access) in the number of words.	Optional
38	L_B_MinSize	Describes the minimum size of the link relay data (LB) in the number of bits.	Optional
39	L_W_MinSize	Describes the minimum size of the link register data (LW) in the number of words.	Optional
40	S_B_Address	Describes the start address used for send bit data (RX) communications.	*3
41	S_W_Address	Describes the start address used for send word data (RWr) communications.	*3
42	R_B_Address	Describes the memory address used for receive bit data (RY) communications.	*3
43	R_W_Address	Describes the memory address used for receive word data (RWw) communications.	*3
44	StsW_Address	Describes the memory address for the status notification device (StsW).	Required
45	PDOConfigIndex1	Describes the index of the PDO configuration.	*4
46	PDOConfigPDOType1	Describes the PDO type of the PDO configuration.	*5
47	PDOConfigMemoryAddress1	Describes the memory address of the PDO configuration.	*5
48	PDOConfigPossibleMapping1	Describes the PDO mapping objects that can be set in PDO Assignment of the PDO configuration as an array in priority order.	*5
49	S_General_Address	Describes the memory address for general send access.	*3
50	R_General_Address	Describes the memory address for general receive access.	*3

\*1: Description is prohibited when the StationMode element is not described.

Description is required when the StationMode element is described.

\*2: Description is required for a CAN compatible device (device with the CanProfileNum element). When a device is not compatible with CAN, description is prohibited.

\*3: The memory address information of the available communication type is required. Description of the memory address information of the unavailable communication type is prohibited.

\*4: Description is required when the device performs the PDO communications. Describe the required number of indexes. When a device does not perform the PDO communications, description is prohibited.

\*5: Description of a corresponding element is required when PDOConfigIndex is described. Description is prohibited when PDOConfigIndex is not described.

(2) Control & Communication System Profile Specification (BAP-C2008ENG-001) - 5.5.10.5.3.3  
Description details of COMM\_IF\_INFO part

Table 4.1-2 lists the elements which configure the COMM\_IF\_INFO part of the extension module.

**Table 4.1-2 List of Elements which Configure the COMM\_IF\_INFO Part of the Extension Module**

	No.	Element	Description	Required/ Optional
Common part	1	VendorName	Describes the name of the vendor that manufactured the module.	Required
	2	VendorCode	Describes the code of vendor that manufactured the module. The membership number (fifth to eighth digits) of the CC-Link Partner Association is described.	Required
	3	CommIfTypeID	Describes the ID that indicates the communication interface type in a string.	Required
	4	Version	Describes the firmware version in a string.	Required
Network-dependent part	5	EXTExtensionModulePriority	Describes the priority of the extension module. Lower-priority extension modules can only be connected to higher-priority extension modules.	Optional
	6	EXTExtensionModuleType	Describes the extension module type. The descriptions of EXTExtensionModuleType of the main module and the descriptions of EXTExtensionModuleType of the extension module determine if the extension module can be connected. For details, refer to Section 5.5.10.5.2.1 (3) in the Control & Communication System Profile Specification (BAP-C2008ENG-001).	Optional
	7	EXTBasicModuleCommIfTypeID	Describes the communication interface type of the main module. The same information as that described in CommIfTypeID of the main module connected is described.	Required
	8	ModelCode	Describes the model code.	Optional
	9	AutoSettingHeaderType	Describes the header type number of the slave station parameter automatic setting.	Optional
	10	AutoSettingType	Describes the type of the slave station parameter automatic setting.	Optional

## (3) CSP+ descriptions

Figure 4.1-1 shows a display example of the COMM\_IF\_INFO part when the CSP+ for the analog-digital converter module (NZ2GN2B-60AD4) is opened in CSP+ profile creation support tool.

**Point**

When the specifications of the device in the network settings do not change, create one common BLOCK, and refer to the BLOCK from the multiple COMM\_IF sections.

commifinfo x						
LABEL	LABEL2	CATEGORY	NAME	DATATYPE	DATA	REMARK
1 VendorName	Vendor name	COMMON	Vendor name	STRING U(64)	Mitsubishi Electric Corporation	1
2 VendorCode	Vendor code	COMMON	Vendor code	WORD	0x0000	2
3 CommIfTypeID	Communication interface type ID	COMMON	Communication interface type ID	STRING(32)	CCLinkIETSN	3
4 Version	Version	COMMON	Version	UINT16	1	4
5 AutoSettingHeaderType	Auto setting header type	COMMON CC-Link IE TSN	Auto-setting header type	BYTE	0x00	8
6 AutoSettingType	Auto setting type	COMMON CC-Link IE TSN	Auto-setting type	WORD	0x0001	9
7 ModelCode	Device code	COMMON CC-Link IE TSN	Device code	UINT32	1342177283	10
8 DevModel	Model name Type name	COMMON CC-Link IE TSN	Model name Type name	STRING(48)	NZ2GN2B-60AD4	12
9 CommunicationCycleMinTime ns	The shortest comm cycle ns	COMMON CC-Link IE TSN	The shortest communication cycle ns	UINT32	31250	15
10 IEEE802 1ASFunction	IEEE802 1AS function	COMMON CC-Link IE TSN	IEEE802 1AS function	BOOL	1	16
11 ReceptionFunction100M	Reception function 100Mbps	COMMON CC-Link IE TSN	Reception function 100Mbps	BOOL	0	17
12 RelayFunction100M	Relay function 100Mbps	COMMON CC-Link IE TSN	Relay function 100Mbps	BOOL	0	17
13 ReceptionFunction1G	Reception function 1Gbps	COMMON CC-Link IE TSN	Reception function 1Gbps	BOOL	1	18
14 RelayFunction1G	Relay function 1Gbps	COMMON CC-Link IE TSN	Relay function 1Gbps	BOOL	1	19
15 MultiCastFunction	Broad multicast function	COMMON CC-Link IE TSN	Broad multicast function	BOOL	1	20
16 CertificationClass	Authentication class	COMMON CC-Link IE TSN	Authentication class	STRING U(2)	B	21
17 S B DefaultSize	Send bit data default size	COMMON CC-Link IE TSN	Send bit data default size	UINT32	32	22
18 S W DefaultSize	Send word data default size	COMMON CC-Link IE TSN	Send word data default size	UINT16	16	23
19 R B DefaultSize	Receive bit data default size	COMMON CC-Link IE TSN	Receive bit data default size	UINT32	32	24
20 R W DefaultSize	Receive word data default size	COMMON CC-Link IE TSN	Receive word data default size	UINT16	16	25
21 S B MaxSize	Send bit data maximum size	COMMON CC-Link IE TSN	Send bit data maximum size	UINT32	128	28
22 S W MaxSize	Send word data maximum size	COMMON CC-Link IE TSN	Send word data maximum size	UINT16	64	29
23 R B MaxSize	Receive bit data maximum size	COMMON CC-Link IE TSN	Receive bit data maximum size	UINT32	128	30
24 R W MaxSize	Receive word data maximum size	COMMON CC-Link IE TSN	Receive word data maximum size	UINT16	64	31
25 S B MinSize	Send bit data minimum size	COMMON CC-Link IE TSN	Send bit data minimum size	UINT32	0	34
26 S W MinSize	Send word data minimum size	COMMON CC-Link IE TSN	Send word data minimum size	UINT16	0	35
27 R B MinSize	Receive bit data minimum size	COMMON CC-Link IE TSN	Receive bit data minimum size	UINT32	0	36
28 R W MinSize	Receive word data minimum size	COMMON CC-Link IE TSN	Receive word data minimum size	UINT16	0	37
29 S B Address	Send bit data address	COMMON CC-Link IE TSN	Send bit data address	DWORD	0x00000010	40
30 S W Address	Send word data address	COMMON CC-Link IE TSN	Send word data address	DWORD	0x00000040	41
31 R B Address	Receive bit data address	COMMON CC-Link IE TSN	Receive bit data address	DWORD	0x00000000	42
32 R W Address	Receive word data address	COMMON CC-Link IE TSN	Receive word data address	DWORD	0x00000030	43
33 StsW Address	StateNotification device address	COMMON CC-Link IE TSN	Status notification device address	DWORD	0x00000260	44

Figure 4.1-1 Display Example When CSP+ Profile Creation Support Tool is Used (COMM\_IF\_INFO)

Figure 4.1-2 shows a display example of the COMM\_IF\_INFO part of the extension module.

Commifinfo x							
	LABEL	LABEL2	CATEGORY	NAME	DATATYPE	DATA	REMARK
1	VendorName	Vendor Name	COMMON	Vendor Name	STRING U(64)	Mitsubishi Electric	1
2	VendorCode	Vendor Code	COMMON	Vendor Code	WORD	0x0000	2
3	CommIfTypeID	Communication Interface Type ID	COMMON	Communication Interface Type ID	STRING(32)	V0000 ABCD	3
4	Version	Version	COMMON	Version	UINT16	1	4
5	EXTBasicModuleCommIfTypeID	Main Module Communication IF ID	COMMON ExType	Main Module Communication Interface ID	STRING(32)	CCLinkIETSN	7
6	AutoSettingType	AutoSettingType	COMMON ExType	Auto Setting Type	WORD	0x0001	10

Figure 4.1-2 Display Example of the COMM\_IF\_INFO Part of the Extension Module

#### (4) Utility software - (CC-Link IE TSN configuration diagram)

The following shows how the descriptions in the CSP+ for the analog-digital converter module (NZ2GN2B-60AD4) are displayed on the utility software. A display example of utility software (CC-Link IE TSN configuration diagram) is shown below.

**Point**  
The displayed station type changes depending on the value of LocalFunction.  
0x00: Remote station  
0x01: Local station

**Point**  
When the value of S\_B.DefaultSize is 0 and the value of S\_B.MaxSize is smaller than the input unit, "Points", "Start", and "End" of "RX Setting" cannot be set.

**Point**  
When the value of R\_B.DefaultSize is 0 and the value of R\_B.MaxSize is smaller than the input unit, "Points", "Start", and "End" of "RY Setting" cannot be set.

**Point**  
When the value of S\_W.DefaultSize is 0 and the value of S\_W.MaxSize is smaller than the input unit, "Points", "Start", and "End" of "RWr Setting" cannot be set.

**Point**  
When the value of R\_W.DefaultSize is 0 and the value of R\_W.MaxSize is smaller than the input unit, "Points", "Start", and "End" of "RWw Setting" cannot be set.

**Point**  
When the value of L\_B.DefaultSize is 0 and the value of L\_B.MaxSize is smaller than the input unit, "Points", "Start", and "End" of "LB Setting" cannot be set.

**Point**  
When the value of L\_W.DefaultSize is 0 and the value of L\_W.MaxSize is smaller than the input unit, "Points", "Start", and "End" of "LW Setting" cannot be set.

**Point**  
This field is displayed only when ObjectDictionaryFileName is described. The field is empty when ObjectDictionaryFileName is not described.

**Point**  
" <Detail Setting> " is displayed only when a module that supports the slave station parameter automatic setting function is used. The field is empty when a module does not support the slave station parameter automatic setting function is used.

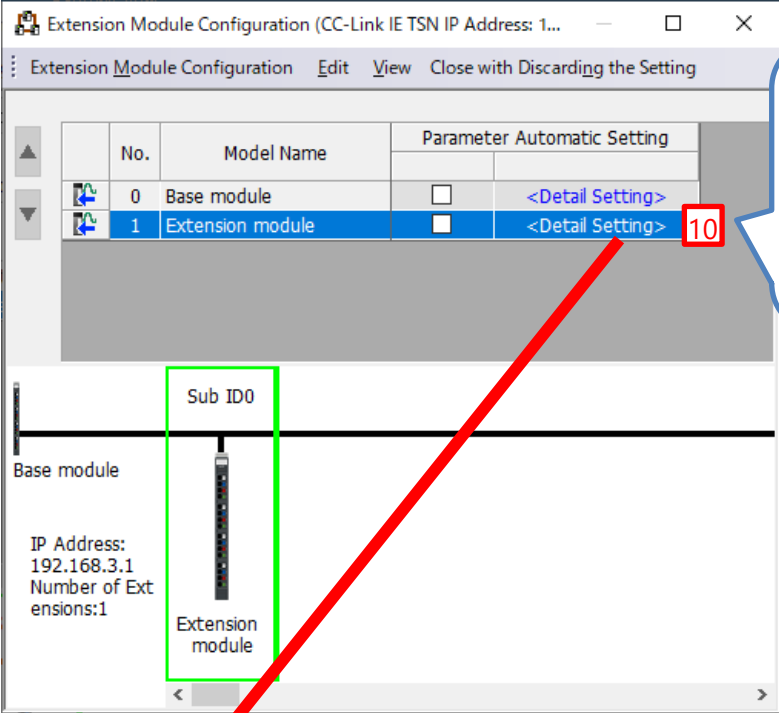
**Point**  
The name set in the DATA item of StationModeName is displayed when station mode can be changed. This field is empty when station mode cannot be changed.

No.	Model Name	STA#	Station	RX Setting	RW Setting	LB Setting	LW Setting
0	Host Station	0	Master Station				
1	MR-J5-G	1	Remote Station	22 28 34	23 29 35	24 30 36	25 31 37
2	MR-J5W3-G	2	Remote Station	32 0000 001F	32 0000 001F	32 0048 0067	32 0048 0067
3	MR-J5W3-G_BC_Axis	3	Remote Station	32 0020 003F	32 0020 003F	32 0048 0067	32 0048 0067
4	NZ2GN2B-60AD4	4	Remote Station				
5	NZ2GN2B1-32DT	5	Remote Station				

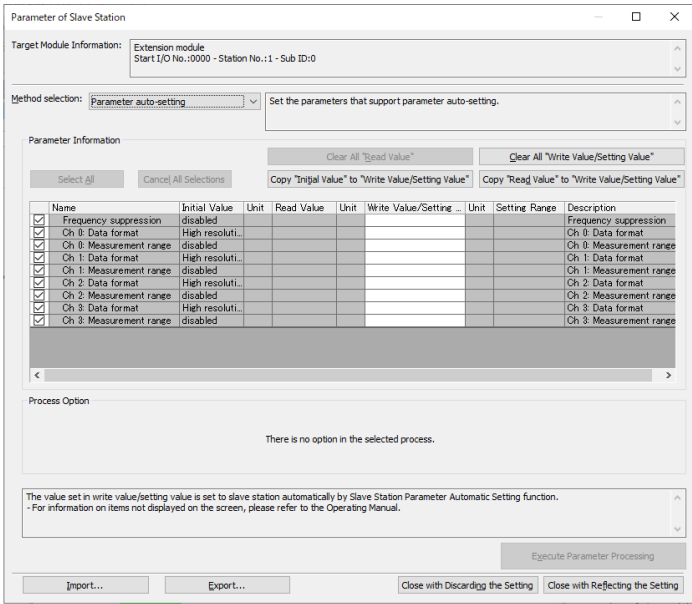
Assignment Method	Communication Period Interval	Parameter Automatic Setting	IP Address	Subnet Mask	Default Gateway	Reserved/Error Invalid Station	Network Synchronous Communication	Communication Period Setting	Station Information
Basic Period	1.00 us	Mapping Setting	192.168.3.253			No Setting	Asynchronous	Basic Period	Station-specific mode setting
			192.168.3.1			No Setting	Asynchronous	Basic Period	h Mode
			192.168.3.2			No Setting	Asynchronous	Basic Period	h Mode
			192.168.3.3			No Setting	Asynchronous	Basic Period	
			192.168.3.4			No Setting	Asynchronous	Basic Period	

(5) Utility software - (CC-Link IE TSN extension module configuration diagram)

The following shows how the descriptions in the CSP+ for the extension module are displayed on the utility software. A display example of the utility software (CC-Link IE TSN extension module configuration diagram) is shown below.



**Point**  
"<Detail Setting>" is displayed only when a module that supports the slave station parameter automatic setting function is used. The field is empty when a module does not support the slave station parameter automatic setting function is used.



• Exported CSV format file

7	A	B	C	
CCLinkIETSN_V0000_ABCD	CSV			1
Vendor Code	Vendor Name	Model Name	Mo	
0x0000	Mitsubishi Electric	Extension module	Ext	



(6) Elements not being used on the utility software window despite being described in the CSP+ description specifications

Table 4.1-3 lists the elements not being used on the utility software window despite being described in the CSP+ description specifications.

**Table 4.1-3 Elements Not Being Used on Utility Software Window (COMM\_IF\_INFO)**

No.	Element	Application	Required/ Optional
1	VendorName	Reference information. This element is displayed only in CSP+ profile creation support tool.	Required
2	VendorCode	Information to specify the device. If this value is changed at the time of CSP+ update, the utility software handles the CSP+ as that of a different device.	Required
3	CommIFTypeID	Used to specify in which configuration diagram this device is used based on the description. Description example: CCLink: Used in the CC-Link configuration diagram CCIEField: Used in the CC-Link IE Field configuration diagram CCLinkETSN: Used in the CC-Link IE TSN configuration diagram	Required
4	Version	Reference information. For example, assuming that the software version is A, the software is updated as versions B, C, ... as revised.	Required
5	StationMode	An ID to uniquely identify station mode.	Optional
8	AutoSettingHeaderType	For future expansion	Optional
10	ModelCode	Checks whether a model code matches the one acquired from the actual device during automatic detection of the connected device. If the network module (example: inverter and GOT) is separate from the device (main body), the model name is described by separately numbering each network.	Required
11	ModelCodeEx	For future expansion	Optional
12	DevModel	Reference information. This element is displayed only in CSP+ profile creation support tool.	Required
13	CanProfileNum	Reference information. This element is displayed only in CSP+ profile creation support tool.	Optional
15	IEEE802_1ASFunction	Reference information. This element is displayed only in CSP+ profile creation support tool.	Required
16	ReceiveFunction100M	Describes the set value to the master module as parameters.	Required
17	RelayFunction100M	Reference information. This element is displayed only in CSP+ profile creation support tool.	Required
18	ReceiveFunction1G	Describes the set value to the master module as parameters.	Required
19	RelayFunction1G	Reference information. This element is displayed only in CSP+ profile creation support tool.	Required
20	MultiCastFunction	Reference information. This element is displayed only in CSP+ profile creation support tool.	Required
21	CertificationClass	Reference information. This element is displayed only in CSP+ profile creation support tool.	Required
40	S_B_Address	Describes the set value to the master module as parameters.	*1
41	S_W_Address	Describes the set value to the master module as parameters.	*1
42	R_B_Address	Describes the set value to the master module as parameters.	*1
43	R_W_Address	Describes the set value to the master module as parameters.	*1
44	StsW_Address	Describes the set value to the master module as parameters.	Required
45	PDOConfigIndex1	A data referenced for PDO mapping. The display may be affected by the PDO mapping future expansion.	*2
46	PDOConfigPDOType1	A data referenced for PDO mapping. The display may be affected by the PDO mapping future expansion.	*3
47	PDOConfigMemoryAddress1	A data referenced for PDO mapping. The display may be affected by the PDO mapping future expansion.	*3

No.	Element	Application	Required/ Optional
48	PDOConfigPossibleMapping1	A data referenced for PDO mapping. The display may be affected by the PDO mapping future expansion.	*3
49	S_General_Address	Reference information. This element is displayed only in CSP+ profile creation support tool.	*1
50	R_General_Address	Reference information. This element is displayed only in CSP+ profile creation support tool.	*1

- \*1: The memory address information of the available communication type is required. Description of the memory address information of the unavailable communication type is prohibited.
- \*2: Description is required when the device performs the PDO communications. Describe the required number of indexes. When a device does not perform the PDO communications, description is prohibited.
- \*3: Describe a corresponding element when PDOConfigIndex is described. Description is prohibited when PDOConfigIndex is not described.

(7) Elements not being used on the utility software window despite being described in the CSP+ description specifications (extension module)

Table 4.1-4 lists the elements not being used on the utility software window despite being described in the CSP+ description specifications (extension module).

**Table 4.1-4 Elements Not Being Used on Utility Software Window (COMM\_IF\_INFO of Extension Module)**

No.	Element	Application	Required/Optional
1	VendorName	Reference information. This element is displayed only in CSP+ profile creation support tool.	Required
2	VendorCode	Information to specify the device. If this value is changed at the time of CSP+ update, the utility software handles the CSP+ as that of a different device.	Required
3	CommIFTypeID	Used to specify in which configuration diagram this device is used based on the description. Description example: CCLink: Used in the CC-Link configuration diagram CCIEField: Used in the CC-Link IE Field configuration diagram CCLinkIETSN: Used in the CC-Link IE TSN configuration diagram	Required
4	Version	Reference information. For example, assuming that the software version is A, the software is updated as versions B, C, ... as revised.	Required
5	EXTExtensionModulePriority	Used to determine the priority of the extension module. Extension modules with larger values can be connected closer to the main module.	Optional
6	EXTExtensionModuleType	Used to check if the extension module can be connected.	Optional
8	ModelCode	Used to link the actual device to the CSP+ at automatic detection.	Optional
9	AutoSettingHeaderType	Used to check if the module supports the slave station parameter automatic setting function.	Optional

## 4.2 COMM\_IF\_INPUT Part

The COMM\_IF\_INPUT part describes the information related to the input information of the communication interface. (This part needs to be described when there is information output from the control side of the target module.)

The information includes the remote input RX area and remote register RWr area of the remote station.

Elements configuring the COMM\_IF\_INPUT part are defined based on the functions of the target module.

The configuration of each element of the COMM\_IF\_INPUT part, that is, the items to be described in each element, is the same.

### (1) Control & Communication System Profile Specification (BAP-C2008ENG-001) - 5.3.2 COMM\_IF\_INPUT part

Table 4.2-1 lists the items to be described in each element of the COMM\_IF\_INPUT part.

**Table 4.2-1 List of Items to be Described in Each Element of the COMM\_IF\_INPUT Part**

No.	Item	Description	Required/ Optional
<b>1</b>	LABEL	Describes the label for identifying the element.	Required
<b>2</b>	LABEL2	Describes the label for identifying the element. (This item is used when the utility software supports other languages.)	Optional
<b>3</b>	CATEGORY	Describes the category for grouping the element.	Optional
<b>4</b>	NAME	Describes the element name. This item is used when displaying the name or descriptions on utility software.	Optional
<b>5</b>	DATATYPE*1	Describes the data type of the element.	Optional
<b>6</b>	DEFAULT	Describes the default to be set for the element.	Optional
<b>7</b>	RANGE	Describes the setting range of the element.	Optional
<b>8</b>	MIN_INC	Describes the minimum increment applied to the element value.	Optional
<b>9</b>	ENG_UNIT	Describes the engineering unit applied to the element value.	Optional
<b>10</b>	ACCESS	Describes the access attribute of the element.	Optional
<b>11</b>	ASSIGN	Describes the remote input and remote register that assign the element value.	Optional
<b>12</b>	UI_ATTRIBUTE	Describes the display method when the element is displayed on utility software.	Optional
<b>13</b>	REF	Describes a reference to the element of the BLOCK_OUTPUT part.	Optional
<b>14</b>	COMMENT	Describes the meaning of the element and usage precautions.	Optional

\*1: When STRUCT is specified, refer to "STRUCT part" in Section 4.3 "COMM\_IF\_OUTPUT Part".

(2) CSP+ descriptions

The following shows a display example of the COMM\_IF\_INPUT part when the CSP+ for the analog-digital converter module (NZ2GN2B-60AD4) is opened in CSP+ profile creation support tool.

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	LABEL	LABEL2	CATEGORY	NAME	DATATYPE	DEFAULT	RANGE	MIN_INQ	ENG_UNIT	ACCESS	ASSIGN	UL_ATTRIBUTE	REF	COMMENT	REMARK
3	RemoteReady		System area	Remote READY	BOOL					RF	RxB				
4	InputRangeSwitch		System area	Input range switch enable/disable setting status flag	BOOL					RF	RxC				
5	Rx10		RX	CH1 A/D conversion completed flag	BOOL					RF	Rx10				
6	Rx11		RX	CH2 A/D conversion completed flag	BOOL					RF	Rx11				
7	Rx12		RX	CH3 A/D conversion completed flag	BOOL					RF	Rx12				
8	Rx13		RX	CH4 A/D conversion completed flag	BOOL					RF	Rx13				
9	Rx18		RX	Warning output signal	BOOL					RF	Rx18				
10	Rx1C		RX	Input signal error detection signal	BOOL					RF	Rx1C				
11	Rx1D		RX	Maximum value/minimum value reset completed flag	BOOL					RF	Rx1D				
12	RW0		RWw	Latest error code	WORD					RF	RW0				
13	RW1		RWw	Latest alarm code	WORD					RF	RW1				
14	RW2		RWw	CH1 Digital operation value	WORD					RF	RW2				
15	RW3		RWw	CH2 Digital operation value	WORD					RF	RW3				
16	RW4		RWw	CH3 Digital operation value	WORD					RF	RW4				
17	RW5		RWw	CH4 Digital operation value	WORD					RF	RW5				
18	RW-A		RWw	Input signal error detection flag	STRUCT					RF	RW-A				
19	RW-B		RWw	Warning output flag	STRUCT					RF	RW-B				

MESSAGE part

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11'

12'

RoRWriteInfo

InputSigErrSet

	LABEL	LABEL2	CATEGORY	NAME	DATATYPE	DEFAULT	RANGE	MIN_INQ	ENG_UNIT	OFFSET	REF	COMMENT	REMARK
1	CH1 InputSigErrSenaSetting		Input signal error detection function	CH1 Input signal error detection setting	BIT STRING4					0.0	REM DEVICE BLOCK PARA CH1 InputSigErrSenaSetting		
2	CH2 InputSigErrSenaSetting		Input signal error detection function	CH2 Input signal error detection setting	BIT STRING4					0.4	REM DEVICE BLOCK PARA CH2 InputSigErrSenaSetting		
3	CH3 InputSigErrSenaSetting		Input signal error detection function	CH3 Input signal error detection setting	BIT STRING4					0.8	REM DEVICE BLOCK PARA CH3 InputSigErrSenaSetting		
4	CH4 InputSigErrSenaSetting		Input signal error detection function	CH4 Input signal error detection setting	BIT STRING4					0.C	REM DEVICE BLOCK PARA CH4 InputSigErrSenaSetting		

STRUCT part

(3) Utility software

Omitted because there is no item description example for utility software.

### 4.3 COMM\_IF\_OUTPUT Part

The COMM\_IF\_OUTPUT part describes the information related to the output information of the communication interface. (This part needs to be described when there is information input to the control side of the target module.)

The information includes the remote output RY area and remote register RWW area of the remote station.

Elements configuring the COMM\_IF\_OUTPUT part are defined based on the functions of the target module.

The configuration of each element of the COMM\_IF\_OUTPUT part, that is, the items to be described within each element, is the same as that of the COMM\_IF\_INPUT part.

#### (1) Control & Communication System Profile Specification (BAP-C2008ENG-001) - 5.3.3 COMM\_IF\_OUTPUT part

Table 4.3-1 lists the items to be described in each element of the COMM\_IF\_OUTPUT part.

**Table 4.3-1 List of Items to be Described in Each Element of the COMM\_IF\_OUTPUT Part**

No.	Item	Description	Required/ Optional
1	LABEL	Describes the label for identifying the element.	Required
2	LABEL2	Describes the label for identifying the element. (This item is used when the utility software supports other languages.)	Optional
3	CATEGORY	Describes the category for grouping the element.	Optional
4	NAME	Describes the element name. This item is used when displaying the name or descriptions on utility software.	Optional
5	DATATYPE <sup>1)</sup>	Describes the data type of the element.	Optional
6	DEFAULT	Describes the default to be set for the element.	Optional
7	RANGE	Describes the setting range of the element.	Optional
8	MIN_INC	Describes the minimum increment applied to the element value.	Optional
9	ENG_UNIT	Describes the engineering unit applied to the element value.	Optional
10	ACCESS	Describes the access attribute of the element.	Optional
11	ASSIGN	Describes the remote output and remote register that assign the element value.	Optional
12	UI_ATTRIBUTE	Describes the display method when the element is displayed on utility software.	Optional
13	REF	Describes a reference to the element of the BLOCK_INPUT part.	Optional
14	COMMENT	Describes the meaning of the element and usage precautions.	Optional

**\*1** STRUCT part

The STRUCT part (structure) describes the information related to the structure of the inputs and outputs of multiple elements. A structure is used when an area is divided. Each element of the structure needs to be assigned to a consecutive address.

When describing the reference to the STRUCT part, describe it in the DATATYPE of the reference source. When referencing a description of the STRUCT part from an element in the COMM\_IF section, describe the STRUCT part in the same COMM\_IF section.

**Table 4.3-2 List of Items in the STRUCT Part**

No.	Item	Description	Required/ Optional
<b>1'</b>	LABEL	Describes the label for identifying the element.	Required
<b>2'</b>	LABEL2	Describes the label for identifying the element. (This item is used when the utility software supports other languages.)	Optional
<b>3'</b>	CATEGORY	Describes the category for grouping the element.	Optional
<b>4'</b>	NAME	Describes the element name. This item is used when displaying the name or descriptions on utility software.	Optional
<b>5'</b>	DATATYPE	Describes the data type of the element.	Optional
<b>6'</b>	DEFAULT	Describes the default to be set for the element.	Optional
<b>7'</b>	RANGE	Describes the setting range of the element.	Optional
<b>8'</b>	MIN_INC	Describes the minimum increment applied to the element value.	Optional
<b>9'</b>	ENG_UNIT	Describes the engineering unit applied to the element value.	Optional
<b>10'</b>	OFFSET	Describes the offset of the element.	Optional
<b>11'</b>	REF	Describes the reference to be referenced by the element. When a structure is defined in the COMM_IF section, this item is used to reference input/output of the BLOCK section from each element of the structure. For references which can be described, refer to the following. Control & Communication System Profile Specification (BAP-C2008ENG-001) - 4.3.1.30 REF conventions	Optional
<b>12'</b>	COMMENT	Describes the meaning of the element and usage precautions.	Optional

**(2) CSP+ descriptions**

The following shows a display example of the COMM\_IF\_OUTPUT part when the CSP+ for the analog-digital converter module (NZ2GN2B-60AD4) is opened in CSP+ profile creation support tool.

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	
RyRWwInfo	LABEL	LABEL2	CATEGORY	NAME	DATATYPE	DEFAULT	RANGE	MIN_INC	ENG_UNIT	ACCESS	ASSIGN	UI_ATTRIBUTE	REF	COMMENT	REMARK
1	InitialDataProcessComp		System area	Initial data setting request flag	BOOL					RF	RY9				
2	ErrorClearReq		System area	Error clear request flag	BOOL					RF	RYA				
3	RY1D		RY	Maximum value/minimum value reset request	BOOL					RF	RY1D				
4	RWw2		RWw	CH1 Conversion value shift amount	WORD					RF	RWw2				
5	RWw3		RWw	CH2 Conversion value shift amount	WORD					RF	RWw3				
6	RWw4		RWw	CH3 Conversion value shift amount	WORD					RF	RWw4				
7	RWw5		RWw	CH4 Conversion value shift amount	WORD					RF	RWw5				

**(3) Utility software**

Omitted because there is no item description example for utility software

#### 4.4 COMM\_IF\_PARAMETER Part

The COMM\_IF\_PARAMETER part describes the information related to the parameters of the target module.

The information includes such as A/D conversion enablement/disablement and range settings of the analog-digital converter module (NZ2GN2B-60AD4).

Note that information which cannot be set or referenced via the communication interface, such as values set by using a DIP switch, is not described.

Elements configuring the COMM\_IF\_PARAMETER part are defined based on the communication functions of the target module.

The configuration of each element of the COMM\_IF\_PARAMETER part, that is, the items to be described in each element, is the same.

#### (1) Control & Communication System Profile Specification (BAP-C2008ENG-001) - 5.3.4 COMM\_IF\_PARAMETER part

##### 1) Items to be described in the COMM\_IF\_PARAMETER part

Table 4.4-1 lists the items to be described in each element of the COMM\_IF\_PARAMETER part.

**Table 4.4-1 List of Items to be Described in Each Element of the COMM\_IF\_PARAMETER Part**

No.	Item	Description	Required/ Optional
1	LABEL	Describes the label for identifying the element.	Required
2	LABEL2	Describes the label for identifying the element. (This item is used when the utility software supports other languages.)	Optional
3	CATEGORY	Describes the category for grouping the element.	Optional
4	NAME	Describes the element name. This item is used when displaying the name or descriptions on utility software.	Optional
5	DATATYPE	Describes the data type of the element.	Optional
6	DEFAULT	Describes the default to be set for the element.	Optional
7	RANGE	Describes the setting range of the element.	Optional
8	MIN_INC	Describes the minimum increment applied to the element value along with ENG_UNIT.	Optional
9	ENG_UNIT	Describes the engineering unit applied to the element value along with MIN_INC.	Optional
10	ACCESS	Describes the access attribute of the element.	Optional
11	WRITE_ORDER	Describes the order in which the element is to be described to the module.	Optional
12	ASSIGN	Describes the address and code that assign the element value.	Required
13	UI_ATTRIBUTE	Describes the display method when the element is displayed on utility software.	Optional
14	REF	Describes a reference to an element of the BLOCK_PARAMETER part referenced by an element of the COMM_IF_PARAMETER part.	Optional
15	COMMENT	Describes the meaning of the element and usage precautions.	Optional



## 2) Reference specifications of the COMM\_IF\_PARAMETER part

The specifications of parts related to the COMM\_IF\_PARAMETER part and reference relationship between communication services are described below.

The reference to the elements of the MESSAGE part and elements of the COMM\_IF\_PARAMETER part which carries out the settings and execution using the elements is described. The reference to the BLOCK\_PARAMETER part cannot be described directly from the MESSAGE part. In the example of Figure 4.4-1, "Parameter Write" and "Parameter Read" are described as MESSAGE to read/write parameters 1, 2, ..., of the control function. The reference from each MESSAGE part to the BLOCK\_PARAMETER part is described via the COMM\_IF\_PARAMETER part.

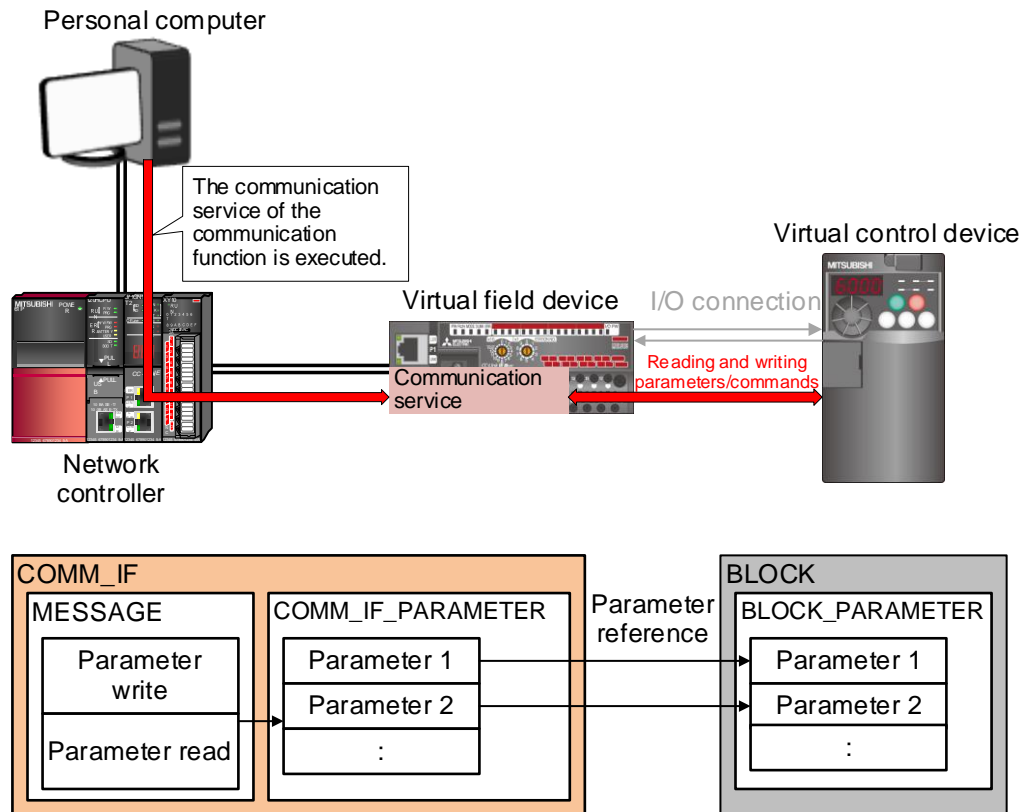


Figure 4.4-1 Example of Reference Specifications of the COMM\_IF\_PARAMETER Part

## (2) CSP+ descriptions

Parameters are referenced in the following order.

MESSAGE part (SLMP\_Message) →

COMMIF\_PARAMETER part (BasicUnitParam) →

STRUCT part (AD\_Conv\_set) →

BLOCK\_PARAMETER part (BLOCK\_PARA)

The following shows a display example of the COMM\_IF\_PARAMETER part when the CSP+ for the analog-digital converter module (NZ2GN2B-60AD4) is opened in CSP+ profile creation support tool.

SLMP_Message x								
LABEL	LABEL2	CATEGORY	NAME	TARGET	ERR_CODE_RANGE	MESSAGE_TYPE	REQUEST_TYPE	REQUEST_DATA
1	SLMPReadParameter		Parameter read	SEQ TARGET		PARAMETER		
2	SLMPBasicUnitReadPrm		Parameter read(Basic module)	BasicUnitParam*		OTHER	rdReqMT Binary	<0x0613><0x0000><0x0000102><0x003A>
3	SLMPWriteParameter		Parameter write	SEQ TARGET		PARAMETER		
4	SLMPReflectPrm		Parameter reflect	CommCommandReflectPrmCommand		OTHER	wrReqMT Binary	<0x1613><0x0000><0x0000FFFF><0x0001>
5	SLMPBasicUnitWritePrm		Parameter write(Basic module)	BasicUnitParam*		OTHER	wrReqMT Binary	<0x1613><0x0000><0x0000102><0x003A>
6	WritePrmToCPU		Parameter auto-setting	SEQ TARGET		AUTO PARAMETER		
7	WritePrmToCPU1		Parameter auto-setting1	AUTOPARA UnitParam1*		OTHER		<0x0000102><0x0001><\$(*VALUE)>
8	WritePrmToCPU2		Parameter auto-setting2	AUTOPARA UnitParam2*		OTHER		<0x0000103><0x0001><\$(*VALUE)>
9	WritePrmToCPU3		Parameter auto-setting3	AUTOPARA UnitParam3*		OTHER		<0x0000105><0x0006><\$(*VALUE)>
10	WritePrmToCPU4		Parameter auto-setting4	AUTOPARA UnitParam4*		OTHER		<0x000010F><0x0001><\$(*VALUE)>
11	WritePrmToCPU5		Parameter auto-setting5	AUTOPARA UnitParam5*		OTHER		<0x0000111><0x0011><\$(*VALUE)>
12	WritePrmToCPU6		Parameter auto-setting6	AUTOPARA UnitParam6*		OTHER		<0x000013D><0x0009><\$(*VALUE)>
13	SLMPClearError		Error clear request	CommCommandClearErrorCommand		COMMAND	wrReqMT Binary	<0x1617><0x0000>
14	SLMPClearErrorLog		Error history clear request	CommCommandErrorLogClearCommand		COMMAND	wrReqMT Binary	<0x1619><0x0000>

MESSAGE part

Reference

"Part name.\*" indicates that all Labels of the reference part are referenced.

BasicUnitParam x												
LABEL	LABEL2	CATEGORY	NAME	DATATYPE	DEFAULT	RANGE	MIN_INC	ENG_UNIT	ACCESS	ASSIGN	UI_ATTRIBUTE	WRITE_ORDER
1	ADConvSetting	Moudle parameter	A/D conversion enable/disable setting	STRUCT AD Conv set					RW	0x0000102		
2	RangeSetting	Moudle parameter	Range setting	STRUCT Range Set					RW	0x0000108		
3	Const1	Moudle parameter	Const1	CONST WORD	0x0000				RW	0x0000104		
4	AveSetting	Moudle parameter	Averaging process setting	STRUCT Ave Set					RW	0x0000105		
5	Const2	Moudle parameter	Const2	CONST WORD	0x0000				RW	0x000010B		
6	Const3	Moudle parameter	Const3	CONST WORD	0x0000				RW	0x000010C		
7	Const4	Moudle parameter	Const4	CONST WORD	0x0000				RW	0x000010D		
8	Const5	Moudle parameter	Const5	CONST WORD	0x0000				RW	0x000010E		
9	InputSigErrSetting	Moudle parameter	Input signal error detection function	STRUCT InputSigErr Set					RW	0x000010F		
10	Const6	Moudle parameter	Const6	CONST WORD	0x0000				RW	0x0000110		
11	WarningOutputSetting	Moudle parameter	Warning output function	STRUCT WarningOut Set					RW	0x0000111		
12	Const7	Moudle parameter	Const7	CONST WORD	0x0000				RW	0x0000122		
13	Const8	Moudle parameter	Const8	CONST WORD	0x0000				RW	0x0000123		
14	Const9	Moudle parameter	Const9	CONST WORD	0x0000				RW	0x0000124		
15	Const10	Moudle parameter	Const10	CONST WORD	0x0000				RW	0x0000125		
16	Const11	Moudle parameter	Const11	CONST WORD	0x0000				RW	0x0000126		
17	Const12	Moudle parameter	Const12	CONST WORD	0x0000				RW	0x0000127		
18	Const13	Moudle parameter	Const13	CONST WORD	0x0000				RW	0x0000128		
19	Const14	Moudle parameter	Const14	CONST WORD	0x0000				RW	0x0000129		
20	Const15	Moudle parameter	Const15	CONST WORD	0x0000				RW	0x000012A		
21	Const16	Moudle parameter	Const16	CONST WORD	0x0000				RW	0x000012B		
22	Const17	Moudle parameter	Const17	CONST WORD	0x0000				RW	0x000012C		
23	Const18	Moudle parameter	Const18	CONST WORD	0x0000				RW	0x000012D		
24	Const19	Moudle parameter	Const19	CONST WORD	0x0000				RW	0x000012E		
25	Const20	Moudle parameter	Const20	CONST WORD	0x0000				RW	0x000012F		
26	Const21	Moudle parameter	Const21	CONST WORD	0x0000				RW	0x0000130		
27	Const22	Moudle parameter	Const22	CONST WORD	0x0000				RW	0x0000131		
28	Const23	Moudle parameter	Const23	CONST WORD	0x0000				RW	0x0000132		
29	ScalingSetting	Moudle parameter	Scaling function	STRUCT Scal Set					RW	0x0000133		

COMM\_IF\_PARAMETER part (1/2)

If the minimum increment cannot be indicated for the specified communication method, describe NA as the minimum increment in the element of the COMM\_IF section.

When describing multiple contents in the item and also when the order thereof is important, bracket them off with "<" ">", then describe the multiple contents in order.

	5	6	7	8	9	10	12	13	11	14	15	
	DATATYPE	DEFAULT	RANGE	MIN_INC	ENG_UNIT	ACCESS	ASSIGN	UI_ATTRIBUTE	WRITE_ORDER	REF	COMMENT	REMARK
setting	STRUCT AD_Conv Set					RW	0x00000102					
	STRUCT Range Set					RW	0x00000103					
	CONST WORD	0x0000				RW	0x00000104					
	STRUCT Ave Set					RW	0x00000105					
	CONST WORD	0x0000				RW	0x0000010B					
	CONST WORD	0x0000				RW	0x0000010C					
	CONST WORD	0x0000				RW	0x0000010D					

## COMM\_IF\_PARAMETER part (2/2)

LABEL	LABEL2	CATEGORY	NAME	DATATYPE	DEFAULT	RANGE	MIN_INC	ENG_UNIT	OFFSET	REF	COM	ATT
1	CH1 ADConversionSetting	A/D conversion enable/disable setting	CH1 A/D conversion enable/disable setting	BOOL					0.0	REM DEVICE BLOCK PARA.CH1 ADConversionSetting		
2	CH2 ADConversionSetting	A/D conversion enable/disable setting	CH2 A/D conversion enable/disable setting	BOOL					0.1	REM DEVICE BLOCK PARA.CH2 ADConversionSetting		
3	CH3 ADConversionSetting	A/D conversion enable/disable setting	CH3 A/D conversion enable/disable setting	BOOL					0.2	REM DEVICE BLOCK PARA.CH3 ADConversionSetting		
4	CH4 ADConversionSetting	A/D conversion enable/disable setting	CH4 A/D conversion enable/disable setting	BOOL					0.3	REM DEVICE BLOCK PARA.CH4 ADConversionSetting		

STRUCT part

BasicUnitParam	AD_Conv_Set	BLOCK_PARA	X						
LABEL	LABEL2	CATEGORY	NAME	DATATYPE	DEFAULT	RANGE	MIN_INQ	ENG_UNIT	ACCESS
1	CH1 ADConversionSetting	A/D conversion enable/disable setting	CH1 A/D conversion enable/disable setting	BOOL	0	ENUM EnableOFF DisableON			RW
2	CH2 ADConversionSetting	A/D conversion enable/disable setting	CH2 A/D conversion enable/disable setting	BOOL	0	ENUM EnableOFF DisableON			RW
3	CH3 ADConversionSetting	A/D conversion enable/disable setting	CH3 A/D conversion enable/disable setting	BOOL	0	ENUM EnableOFF DisableON			RW
4	CH4 ADConversionSetting	A/D conversion enable/disable setting	CH4 A/D conversion enable/disable setting	BOOL	0	ENUM EnableOFF DisableON			RW
5	CH1 RangeSetting	Range setting	CH1 Range setting	BIT STRING4	0x0	ENUM RangeSet			RW
6	CH2 RangeSetting	Range setting	CH2 Range setting	BIT STRING4	0x0	ENUM RangeSet			RW
7	CH3 RangeSetting	Range setting	CH3 Range setting	BIT STRING4	0x0	ENUM RangeSet			RW
8	CH4 RangeSetting	Range setting	CH4 Range setting	BIT STRING4	0x0	ENUM RangeSet			RW
9	CH1 AveragingProcessSetting	Averaging process setting	CH1 Averaging process setting	BIT STRING4	0x0	ENUM AveProcess Set			RW
10	CH2 AveragingProcessSetting	Averaging process setting	CH2 Averaging process setting	BIT STRING4	0x0	ENUM AveProcess Set			RW
11	CH3 AveragingProcessSetting	Averaging process setting	CH3 Averaging process setting	BIT STRING4	0x0	ENUM AveProcess Set			RW
12	CH4 AveragingProcessSetting	Averaging process setting	CH4 Averaging process setting	BIT STRING4	0x0	ENUM AveProcess Set			RW
13	CH1 AveragingProcessSettingValue	Averaging process setting	CH1 Time average/Count average/Moving average	UINT16	0	(0.65000)			RW
14	CH2 AveragingProcessSettingValue	Averaging process setting	CH2 Time average/Count average/Moving average	UINT16	0	(0.65000)			RW
15	CH3 AveragingProcessSettingValue	Averaging process setting	CH3 Time average/Count average/Moving average	UINT16	0	(0.65000)			RW
16	CH4 AveragingProcessSettingValue	Averaging process setting	CH4 Time average/Count average/Moving average	UINT16	0	(0.65000)			RW
17	CH1 InputSignalErrorSignalSetting	Input signal error detection function	CH1 Input signal error detection setting	BIT STRING4	0x0	ENUM InputSigErr Set			RW
18	CH2 InputSignalErrorSignalSetting	Input signal error detection function	CH2 Input signal error detection setting	BIT STRING4	0x0	ENUM InputSigErr Set			RW
19	CH3 InputSignalErrorSignalSetting	Input signal error detection function	CH3 Input signal error detection setting	BIT STRING4	0x0	ENUM InputSigErr Set			RW
20	CH4 InputSignalErrorSignalSetting	Input signal error detection function	CH4 Input signal error detection setting	BIT STRING4	0x0	ENUM InputSigErr Set			RW
21	CH1 WarningOutputSetting	Warning output function	CH1 Warning output setting	BOOL	1	ENUM EnableOFF DisableON			RW
22	CH2 WarningOutputSetting	Warning output function	CH2 Warning output setting	BOOL	1	ENUM EnableOFF DisableON			RW
23	CH3 WarningOutputSetting	Warning output function	CH3 Warning output setting	BOOL	1	ENUM EnableOFF DisableON			RW
24	CH4 WarningOutputSetting	Warning output function	CH4 Warning output setting	BOOL	1	ENUM EnableOFF DisableON			RW
25	CH1 ProcessAlarmLowUpLow	Warning output function	CH1 Process alarm lower lower limit value	INT16	0	-32768.32767			RW
26	CH1 ProcessAlarmLowUpLow	Warning output function	CH1 Process alarm lower upper limit value	INT16	0	-32768.32767			RW
27	CH1 ProcessAlarmLowUpLow	Warning output function	CH1 Process alarm upper lower limit value	INT16	0	-32768.32767			RW
28	CH1 ProcessAlarmLowUpLow	Warning output function	CH1 Process alarm upper upper limit value	INT16	0	-32768.32767			RW
29	CH2 ProcessAlarmLowUpLow	Warning output function	CH2 Process alarm lower lower limit value	INT16	0	-32768.32767			RW
30	CH2 ProcessAlarmLowUpLow	Warning output function	CH2 Process alarm lower upper limit value	INT16	0	-32768.32767			RW
31	CH2 ProcessAlarmLowUpLow	Warning output function	CH2 Process alarm upper lower limit value	INT16	0	-32768.32767			RW
32	CH2 ProcessAlarmLowUpLow	Warning output function	CH2 Process alarm upper upper limit value	INT16	0	-32768.32767			RW
33	CH3 ProcessAlarmLowUpLow	Warning output function	CH3 Process alarm lower lower limit value	INT16	0	-32768.32767			RW
34	CH3 ProcessAlarmLowUpLow	Warning output function	CH3 Process alarm lower upper limit value	INT16	0	-32768.32767			RW
35	CH3 ProcessAlarmLowUpLow	Warning output function	CH3 Process alarm upper lower limit value	INT16	0	-32768.32767			RW
36	CH3 ProcessAlarmLowUpLow	Warning output function	CH3 Process alarm upper upper limit value	INT16	0	-32768.32767			RW
37	CH4 ProcessAlarmLowUpLow	Warning output function	CH4 Process alarm lower lower limit value	INT16	0	-32768.32767			RW
38	CH4 ProcessAlarmLowUpLow	Warning output function	CH4 Process alarm lower upper limit value	INT16	0	-32768.32767			RW

## BLOCK\_PARAMETER part (1/2)

BasicUnitParam		AD_Conv_set	BLOCK PARA	REMARK
ATTRIBUTE	WRITE_ORDER	COMMENT		
		Set A/D conversion to "enable" or "disable".		
		Set A/D conversion to "enable" or "disable".		
		Set A/D conversion to "enable" or "disable".		
		Set A/D conversion to "enable" or "disable".		
		Set the input range.		
		Set the input range.		
		Set the input range.		
		Set the input range.		
		Set "Sampling processing" or "Averaging processing".		
		Set "Sampling processing" or "Averaging processing".		
		Set "Sampling processing" or "Averaging processing".		
		Set "Sampling processing" or "Averaging processing".		
		Set the time average (ms), count average (times), moving average count (times).		
		Set the time average (ms), count average (times), moving average count (times).		
		Set the time average (ms), count average (times), moving average count (times).		
		Set the time average (ms), count average (times), moving average count (times).		
		Set a condition for detecting an error.		
		Set a condition for detecting an error.		
		Set a condition for detecting an error.		
		Set a condition for detecting an error.		
		Set warning output to "enable" or "disable".		
		Set warning output to "enable" or "disable".		
		Set warning output to "enable" or "disable".		
		Set warning output to "enable" or "disable".		
		Set a lower lower limit value of the digital operation value.		
		Set a lower upper limit value of the digital operation value.		
		Set an upper lower limit value of the digital operation value.		
		Set an upper upper limit value of the digital operation value.		
		Set a lower lower limit value of the digital operation value.		
		Set a lower upper limit value of the digital operation value.		
		Set an upper lower limit value of the digital operation value.		
		Set an upper upper limit value of the digital operation value.		
		Set a lower lower limit value of the digital operation value.		
		Set a lower upper limit value of the digital operation value.		
		Set an upper lower limit value of the digital operation value.		
		Set an upper upper limit value of the digital operation value.		
		Set a lower lower limit value of the digital operation value.		
		Set a lower upper limit value of the digital operation value.		

BLOCK\_PARAMETER part (2/2)

### (3) Utility software ("Parameter of Slave Station" window)

The following shows how the descriptions in the CSP+ for the analog-digital converter module (NZ2GN2B-60AD4) are displayed on the utility software. The following is a display example of utility software ("Parameter of Slave Station" window).

Parameter of Slave Station

Target Module Information: NZ2GN2B-60AD4  
Start I/O No.:0000 - Station No.:3

Method selection: Parameter write (selected)  
Parameter read  
Parameter auto-setting

The parameters are written to the target module.

Parameter Info: Parameter auto-setting

Clear All "Read Value" Clear All "Write Value/Setting Value"

Name	Initial Value	Unit	Read Value	Unit	Write Value/Setting Value	Unit	Setting Range	Description
<input checked="" type="checkbox"/> D/A conversion enable/disable								
CH1 D/A conversion enable/disable	Disable							Set D/A conversion enable/disable
CH2 D/A conversion enable/disable	Disable							Set D/A conversion enable/disable
CH3 D/A conversion enable/disable	Disable							Set D/A conversion enable/disable
CH4 D/A conversion enable/disable	Disable							Set D/A conversion enable/disable
<input checked="" type="checkbox"/> Range setting								
CH1 Range setting	4~20mA							Set the output range
CH2 Range setting	4~20mA							Set the output range
CH3 Range setting	4~20mA							Set the output range
CH4 Range setting	4~20mA							Set the output range
<input checked="" type="checkbox"/> Analog output HOLD/CLEAR								
CH1 Analog output HOLD/CLEAR	CLEAR							Set the output HOLD/CLEAR

Process Option

There is no option in the selected process.

-The refreshed device values of remote I/O or remote registers may be overwritten.  
-Accesses the PLC CPU by using the current connection destination. Please check if there is any problem with the connection destination.  
-Process is executed according to the parameters written in the PLC CPU.  
-For information on items not displayed on the screen, please refer to the Operating Manual.

☐ Enable safety module when succeed to write parameter

Execute Parameter Processing

Import... Export... Close with Discarding the Setting Close with Reflecting the Setting

### (4) Items not being used on the utility software window despite being described in the CSP+ description specifications

Table 4.4-2 lists the items not being used on the utility software window despite being described in the CSP+ description specifications.

**Table 4.4-2 Items Not Being Used on the Utility Software Window (COMM\_IF\_PARAMETER)**

No.	Item	Application	Required/Optional
1	LABEL	Used as an identifier.	Required
2	LABEL2	Describes the label for identifying the element. (This item is used when the utility software supports other languages.)	Optional
3	CATEGORY	Reference information. This item is displayed in CSP+ profile creation support tool.	Optional
5	DATATYPE	Used to check the data type.	Optional
8	MIN_INC	Uses the numerical value in which the user input value is multiplied by the value described in MIN_INC during internal processing.	Optional
10	ACCESS	Used to identify the access information of the target item: "Readable", "Writable", "Readable and writable", "Auto refreshable", and "Element not accessible". For details on the description of the element, refer to the following. Control & Communication System Profile Specification (BAP-C2008ENG-001) - 4.3.1.1 ACCESS conventions	Optional
11	WRITE_ORDER	Used as sequence information when writing parameters to the actual device. (Values are written in ascending order.)	Optional
12	ASSIGN	Used to analyze the address and code assigned to the element.	Optional
13	UI_ATTRIBUTE	For future expansion	Optional
14	REF	Used to identify the reference relationship.	Optional

**Point**  
When the same item (NAME or ENG\_UNIT) exists in both the COMM\_IF\_PARAMETER part and the BLOCK\_PARAMETER part, the description in the COMM\_IF\_PARAMETER part is displayed on utility software.

SLMP\_Message BasicUnitParam x

	LABEL	LABEL2	CATEGORY	NAME	DATATYPE	DEFAULT	RANGE	MIN_INC	ENG_UNIT	ACCESS	ASSIGN
1	ADConvSetting		Moudle parameter	A/D conversion enable/disable setting	STRUCT AD Conv set					RW	0x0000
2	RangeSetting		Moudle parameter	Range setting	STRUCT Range Set					RW	0x0000
3	Const1		Moudle parameter	Const1	CONST WORD	0x0000				RW	0x0000
4	AveSetting		Moudle parameter	Averaging process setting	STRUCT Ave Set					RW	0x0000
5	Const2		Moudle parameter	Const2	CONST WORD	0x0000				RW	0x0000
6	Const3		Moudle parameter	Const3	CONST WORD	0x0000				RW	0x0000
7	Const4		Moudle parameter	Const4	CONST WORD	0x0000				RW	0x0000
8	Const5		Moudle parameter	Const5	CONST WORD	0x0000				RW	0x0000

Range\_Set x

	LABEL	LABEL2	CATEGORY	NAME	DATATYPE	DEFAULT	RANGE	MIN_INC	ENG_UNIT	OFFSET	REF
1	CH1 RangeSetting		Range setting	CH1 Range setting	BIT STRING4				Cs	0.0	REM DEVICE BLOCK PARA CH1 RangeSetting
2	CH2 RangeSetting		Range setting	CH2 Range setting	BIT STRING4				0.4		REM DEVICE BLOCK PARA CH2 RangeSetting
3	CH3 RangeSetting		Range setting	CH3 Range setting	BIT STRING4				0.8		REM DEVICE BLOCK PARA CH3 RangeSetting
4	CH4 RangeSetting		Range setting	CH4 Range setting	BIT STRING4				0.0		REM DEVICE BLOCK PARA CH4 RangeSetting

BLOCK\_PARA x

	LABEL	LABEL2	CATEGORY	NAME	DATATYPE	DEFAULT	RANGE	MIN_INC	ENG_UNIT	ACC
1	CH1 RangeSetting		Range setting	CH1 Range setting	BIT STRING4	0x0	ENUM RangeSet		Cs	RW
2	CH2 RangeSetting		Range setting	CH2 Range setting	BIT STRING4	0x0	ENUM RangeSet			RW
3	CH3 RangeSetting		Range setting	CH3 Range setting	BIT STRING4	0x0	ENUM RangeSet			RW
4	CH4 RangeSetting		Range setting	CH4 Range setting	BIT STRING4	0x0	ENUM RangeSet			RW

Reference

Describe the unit on the COMMIF\_PARAMETER part side.

The STRUCT part (Range\_Set) referenced from the COMM\_IF\_PARAMETER part (BasicUnitParam) and the BLOCK\_PARAMETER part (BLOCK\_PARA) have a reference relationship.

Parameter of Slave Station

Target Module Information: NZ2GN2B-60DA4  
Start I/O No.:0000 - Station No.:3

Method selection: Parameter auto-setting

Parameter Information

Name	Initial Value	Unit	Read Value	Unit	Write Value	
<input checked="" type="checkbox"/> D/A conversion enable/disable						
CH1 D/A conversion enable/disable	Disable					Set D/A conversion enable/disable
CH2 D/A conversion enable/disable	Disable					Set D/A conversion enable/disable
CH3 D/A conversion enable/disable	Disable					Set D/A conversion enable/disable
CH4 D/A conversion enable/disable	Disable					Set D/A conversion enable/disable
<input checked="" type="checkbox"/> Range setting						
CH1 Range setting	4~20mA	Cs	Cs	Cs	Cs	Set the output range
CH2 Range setting	4~20mA					Set the output range
CH3 Range setting	4~20mA					Set the output range
CH4 Range setting	4~20mA					Set the output range
<input checked="" type="checkbox"/> Analog output HOLD/CLEAR						
CH1 Analog output HOLD/CLEAR	CLEAR					Set the output range

Process Option

There is no option in the selected process.

The value set in write value/setting value is set to slave station automatically by Slave Station Parameter Automatic Setting function.  
- For information on items not displayed on the screen, please refer to the Operating Manual.

☐ Enable safety module when succeed to write parameter

Execute Parameter Processing

Import... Export... Close with Discarding the Setting Close with Reflecting the Setting

The ENG\_UNIT item in the both the STRUCT part (Range\_Set) and the BLOCK\_PARAMETER part (BLOCK\_PARA) referenced from the COMM\_IF\_PARAMETER part (BasicUnitParam) was changed.  
→ The description in the STRUCT part (Range\_Set) referenced from the COMM\_IF\_PARAMETER part (BasicUnitParam) is displayed.

## 4.5 COMM\_IF\_COMMAND Part

The COMM\_IF\_COMMAND part describes the information related to commands issued by the communication interface.

The information includes such as the error clear request of the analog-digital converter module (NZ2GN2B-60AD4).

Elements configuring the COMM\_IF\_COMMAND part are defined based on the communication functions of the target module.

The configuration of each element of the COMM\_IF\_COMMAND part, that is, the items to be described in each element, is the same.

### (1) Control & Communication System Profile Specification (BAP-C2008ENG-001) - 5.3.5 COMM\_IF\_COMMAND part

#### 1) Items to be described in the COMM\_IF\_COMMAND part

Table 4.5-1 lists the items to be described in each element of the COMM\_IF\_COMMAND part.

**Table 4.5-1 List of Items to be Described in Each Element of the COMM\_IF\_COMMAND Part**

No.	Item	Description	Required/ Optional
<b>1</b>	LABEL	Describes the label for identifying the element.	Required
<b>2</b>	LABEL2	Describes the label for identifying the element. (This item is used when the utility software supports other languages.)	Optional
<b>3</b>	CATEGORY	Describes the category for grouping the element.	Optional
<b>4</b>	NAME	Describes the element name. This item is used when displaying the name or descriptions on utility software.	Optional
<b>5</b>	ARGUMENT	Describes the label corresponding to the COMMAND_ARGUMENT part for indicating the argument to be used by the element.	Optional
<b>6</b>	REF	Describes the reference to the BLOCK_COMMAND part from the element. <b>*2</b>	Optional
<b>7</b>	COMMENT	Describes the meaning of the element and usage precautions.	Optional

#### **\*2** COMMAND ARGUMENT

The COMMAND\_ARGUMENT part (command argument list) describes the information related to arguments of the COMM\_IF\_COMMAND part.

**Table 4.5-2 List of Items in the COMMAND\_ARGUMENT Part**

No.	Item	Description	Required/ Optional
<b>1'</b>	LABEL	Describes the label for identifying the element.	Required
<b>2'</b>	LABEL2	Describes the label for identifying the element. (This item is used when the utility software supports other languages.)	Optional
<b>3'</b>	CATEGORY	Describes the category for grouping the element.	Optional
<b>4'</b>	NAME	Describes the element name. This item is used when displaying the name or descriptions on utility software.	Required
<b>5'</b>	DATATYPE	Describes the data type of the element.	Required
<b>6'</b>	DEFAULT	Describes the default to be set for the element.	Optional
<b>7'</b>	RANGE	Describes the setting range of the element.	Optional
<b>8'</b>	MIN_INC	Describes the minimum increment applied to the value of the element in the command argument list along with ENG_UNIT.	Optional
<b>9'</b>	ENG_UNIT	Describes the engineering unit applied to the value of the element in the command argument list along with MIN_INC.	Optional
<b>10</b>	ACCESS	Describes the access attribute of the element.	Required
<b>11</b>	ASSIGN	Describes the address and code to be assigned to the element.	Optional
<b>12</b>	REF	Describes the reference to be referenced by the element. Use of this item is prohibited under the current specifications.	Optional
<b>13</b>	COMMENT	Describes the meaning of the element and usage precautions.	Optional

## 2) Reference specifications of the COMM\_IF\_COMMAND part

The specifications of parts related to the COMM\_IF\_COMMAND part and reference relationship between communication services are described below. The reference to the elements of the MESSAGE part and elements of the COMM\_IF\_COMMAND part which carries out the settings and execution using the elements to is described. The reference to the BLOCK\_COMMAND part cannot be described directly from the MESSAGE part.

In the example of Figure 4.5-1, "Command A execution" and "Command B execution" are described as MESSAGE to execute commands A and B.

The reference from each MESSAGE part to the BLOCK\_COMMAND part is described via the COMM\_IF\_COMMAND part.

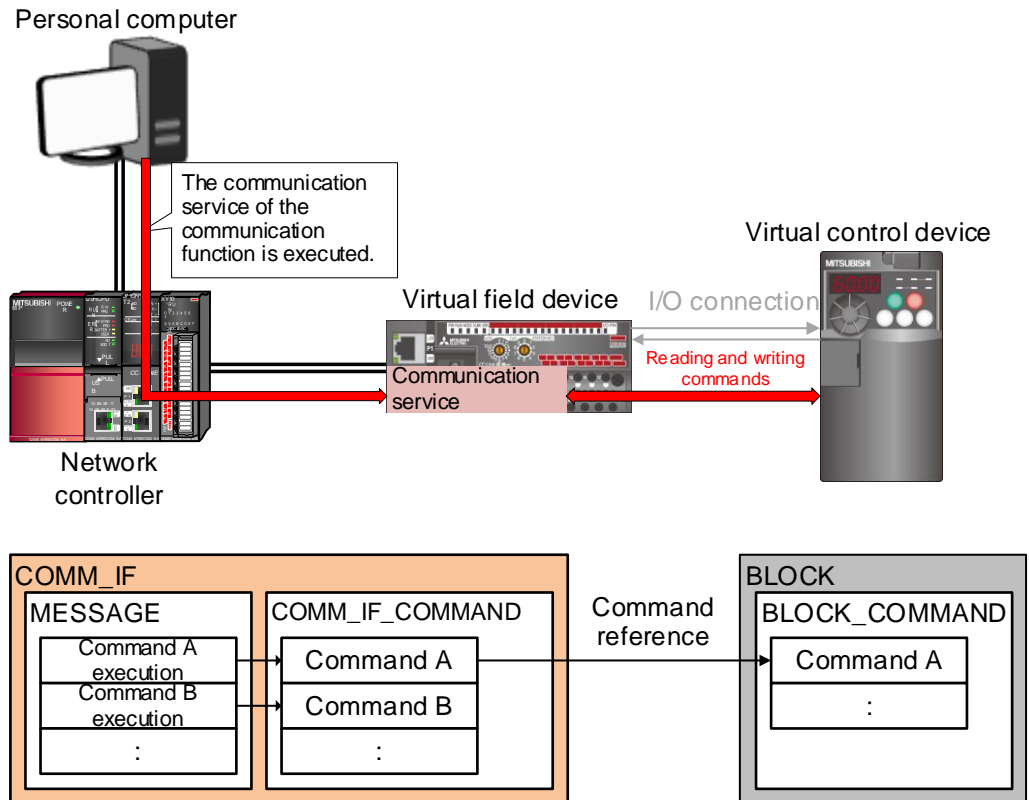


Figure 4.5-1 Example of Reference Specifications of the COMM\_IF\_COMMAND Part



## (2) CSP+ descriptions

Parameters are referenced in the following order.

MESSAGE part (SLMP\_Message) →

COMM\_IF\_COMMAND part (CommCommand) →

BLOCK\_COMMAND part (BLOCK\_COM)

The following shows a display example of the COMM\_IF\_COMMAND part when the CSP+ for the analog-digital converter module (NZ2GN2B-60AD4) is opened in CSP+ profile creation support tool. The following shows a reference example of error clear request in "NAME".

SLMP_Message x									
LABEL	LABEL2	CATEGORY	NAME	TARGET	ERR_CODE_RANGE	MESSAGE_TYPE	REQUEST_TYPE	REQUEST_DATA	
1	SLMPBasicUnitReadPm		Parameter read	SEQ TARGET		PARAMETER	rdReqMT Binary	<0x0613><0x0000><0x0000102><0x00000000>	
2	SLMPBasicUnitReadPm		Parameter read(Basic module)	BasicUnitParam*		OTHER			
3	SLMPWriteParameter		Parameter write	SEQ TARGET		PARAMETER	wrReqMT Binary	<0x1613><0x0000><0x0000FFFF><0x00000000>	
4	SLMPReflectPm		Parameter reflect	CommCommand ReflectPmCommand		OTHER	wrReqMT Binary	<0x1613><0x0000><0x0000102><0x00000000>	
5	SLMPBasicUnitWritePm		Parameter write(Basic module)	BasicUnitParam*		OTHER	wrReqMT Binary	<0x1613><0x0000><0x0000102><0x00000000>	
6	WritePmToCPU		Parameter auto-setting	SEQ TARGET		AUTO PARAMETER			
7	WritePmToCPU1		Parameter auto-setting1	AUTOPARA UnitParam1*		OTHER		<0x0000102><0x0001><0x00000000><0x00000000>	
8	WritePmToCPU2		Parameter auto-setting2	AUTOPARA UnitParam2*		OTHER		<0x0000103><0x0001><0x00000000><0x00000000>	
9	WritePmToCPU3		Parameter auto-setting3	AUTOPARA UnitParam3*		OTHER		<0x0000105><0x0000><0x00000000><0x00000000>	
10	WritePmToCPU4		Parameter auto-setting4	AUTOPARA UnitParam4*		OTHER		<0x000010F><0x0001><0x00000000><0x00000000>	
11	WritePmToCPU5		Parameter auto-setting5	AUTOPARA UnitParam5*		OTHER		<0x0000111><0x0001><0x00000000><0x00000000>	
12	WritePmToCPU6		Parameter auto-setting6	AUTOPARA UnitParam6*		OTHER		<0x0000133><0x0000><0x00000000><0x00000000>	
13	SLMPClearError		Error clear request	CommCommand ErrorClearCommand		COMMAND	wrReqMT Binary	<0x1617><0x0000><0x00000000><0x00000000>	
14	SLMPClearErrorLog		Error history clear request	CommCommand ErrorLogClearCommand		COMMAND	wrReqMT Binary	<0x1619><0x0000><0x00000000><0x00000000>	

CommCommand x									
LABEL	LABEL2	CATEGORY	NAME	ARGUMENT	REF	COMMENT	REMARK		
1	ReflectPmCommand		Parameter reflect		REM DEVICE.BLOCK.COM.ReflectPmCommand				
2	GetDiagCodeInfoCommand				REM DEVICE.BLOCK.COM.GetDiagCodeCommand				
3	ClearErrorCommand		Error clear		REM DEVICE.BLOCK.COM.ErrorClearCommand				
4	ErrorLogClearCommand		Error history clear		REM DEVICE.BLOCK.COM.ErrorLogClearCommand				

BLOCK_COM x							
LABEL	LABEL2	CATEGORY	NAME	ARGUMENT	COMMENT	REMARK	
1	ReflectPmCommand		Parameter reflect command				
2	GetDiagCodeInfoCommand		Get diag code info command	GetDiagCodeArgument			
3	ClearErrorCommand		Error clear request command				
4	ErrorLogClearCommand		Error history clear request command				



### (3) Utility software - ("Command Execution of Slave Station" window)

The following shows how the descriptions in the CSP+ for the analog-digital converter module (NZ2GN2B-60AD4) are displayed on the utility software. The following is a display example of utility software ("Command Execution of Slave Station" window).

### (4) Items not being used on the utility software window despite being described in the CSP+ description specifications

Table 4.5-2 lists the items not being used on the utility software window despite being described in the CSP+ description specifications.

**Table 4.5-2 Items Not Being Used on the Utility Software Window (COMM\_IF\_COMMAND, COMMAND\_ARGUMENT)**

No.	Item	Application	Required/Optional
1 1'	LABEL	Used as an identifier.	Required
2 2'	LABEL2	Describes the label for identifying the element. (This item is used when the utility software supports other languages.)	Optional
3 3'	CATEGORY	Reference information. This item is displayed in CSP+ profile creation support tool.	Optional
5	ARGUMENT	Used to identify the reference relationship to the COMMAND_ARGUMENT part.	Optional
5'	DATATYPE	Used to check the data type.	Required
6 12	REF	Used to identify the reference relationship.	Optional
7	COMMENT	Reference information. This item is displayed in CSP+ profile creation support tool.	Optional
8'	MIN_INC	Uses numerical values in which the user input value is multiplied by the value described in MIN_INC during internal processing.	Optional
10	ACCESS	Used to identify the access information of the target item: "Readable", "Writable", "Readable and writable", "Auto refreshable", and "Element not accessible". For details on the description of the element, refer to the following. Control & Communication System Profile Specification (BAP-C2008ENG-001) - 4.3.1.1 ACCESS conventions	Required
11	ASSIGN	Used to analyze the address and code assigned to the element.	Optional

## 4.6 MESSAGE Part

The MESSAGE part describes the information related to commands issued by the communication interface and the parameter setting procedure in the same manner as the METHOD part.

The MESSAGE part describes commands that use transient commands and data format for the parameter setting.

### (1) Control & Communication System Profile Specification (BAP-C2008ENG-001) - 5.3.7 MESSAGE part

#### 1) Items to be described in the MESSAGE part

Table 4.6-1 lists the items to be described in each element of the MESSAGE part.

**Table 4.6-1 List of Items to be Described in Each Element of the MESSAGE Part**

No.	Item	Description	Required/ Optional
1	LABEL	Describes the label for identifying the element. Add "SLMP" as a prefix for SLMP-based MESSAGE. Example: SLMPGetParam, SLMPInvReset	Required
2	LABEL2	Describes the label for identifying the element. (This item is used when the utility software supports other languages.)	Optional
3	CATEGORY	Describes the category for grouping the element.	Optional
4	NAME	Describes the element name. This item is used when displaying the name or descriptions on utility software.	Required
5	TARGET	Describes the element processed by the corresponding MESSAGE part.	Required
6	MESSAGE_TYPE	Describes the MESSAGE type.	Required
7	REQUEST_TYPE	Describes the type of data format for request processing.	*1
8	REQUEST_DATA	Describes the values for request processing.	Optional
9	REQUEST_DATA_TYPE	Describes the data type of REQUEST_DATA.	Optional
10	RESPONSE_TYPE	Describes the data format type for response processing.	Optional
11	RESPONSE_DATA	Describes the values for response processing.	Optional
12	RESPONSE_DATA_TYPE	Describes the data type of REQUEST_DATA.	Optional
13	ERR_TYPE	Describes the type of data format to be used by the response processing when an error occurs.	Optional
14	ERR_CODE_RANGE	Indicates the error code range.	Optional
15	RELATED_MESSAGE	Describes the reference to the elements of the MESSAGE part that indicates the pre-processing of the MESSAGE part.	Optional
16	COMMENT	Describes the meaning of the element and usage precautions.	Optional

\*1: Required when the item is described in SLMP MESSAGE.

In the case of MESSAGE other than SLMP, MESSAGE should be described according to each MESSAGE specifications. For details, refer to the following.

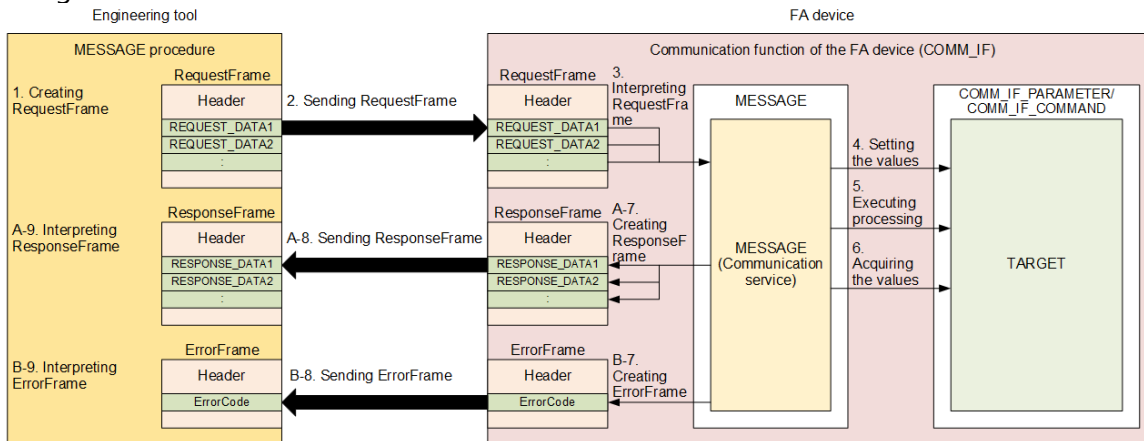
Control & Communication System Profile Specification (BAP-C2008ENG-001)

- 5.5.10.1 Parts and elements related to error related information
- 5.5.10.2 Convention related to MESSAGE for slave station parameter automatic setting

## 2) MESSAGE operation

When performing the communication service that specifies the data format, define and use the data format for the service request to FA devices (RequestFrame), data format for the service response from FA devices at normal end (ResponseFrame), and data format for the error response from FA devices when an error occurs (ErrorFrame).

The following figure shows the communication service procedures and data area information using above-mentioned items.



## 3) MESSAGE call and operation sequence

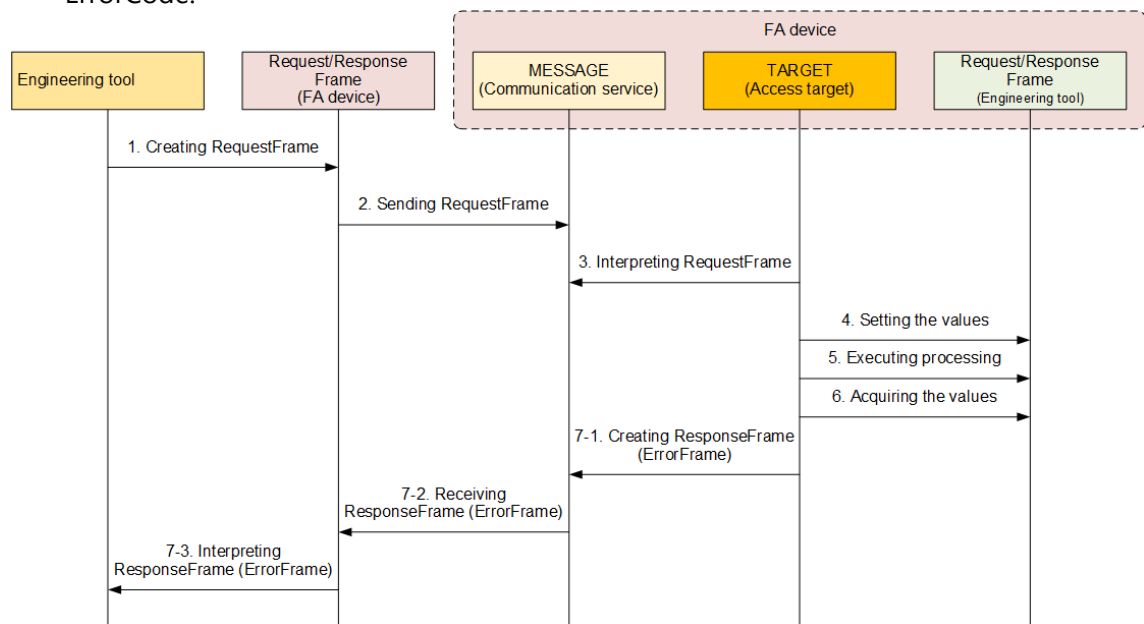
1. Create a RequestFrame in the data format determined by REQUEST\_TYPE, and set REQUEST\_DATA in the format.
2. Send the RequestFrame to the communication function in the FA device.
3. Upon receiving the RequestFrame, the communication function in the FA device parses the RequestFrame and reads the instruction code and setting values.
4. Specify the setting values to TARGET in accordance with the communication service and instruction code.
5. Execute processing of TARGET in accordance with the communication service and instruction code.
6. Acquire the acquisition values of TARGET in accordance with the communication service and instruction code.

[When processing completed successfully]

- 7-1. Set the acquisition values to the ResponseFrame in accordance with the communication service, instruction code, and data format corresponding to RESPONSE\_TYPE.
- 7-2. Receive the ResponseFrame from the communication function in the FA device.
- 7-3. Interpret the ResponseFrame in the data format determined by RESPONSE\_TYPE, and read RESPONSE\_DATA.

[When processing completed with an error]

- 7-1. Set the acquisition values in the ErrorFrame in accordance with the communication service, command code, and data format corresponding to ERR\_TYPE.
- 7-2. Receive the ErrorFrame from the communication function in the FA device.
- 7-3. Interpret the ErrorFrame in the data format determined by RESPONSE\_TYPE, and read ErrorCode.



## (2) CSP+ descriptions

Parameters are referenced in the following order.

MESSAGE part (SLMP\_Message) →

COMM\_IF\_PARAMETER part (BasicParam) →

BLOCK\_PARAMETER part (BLOCK\_PARA)

The following shows a display example of the MESSAGE part when the CSP+ for the analog-digital converter module (NZ2GN2B-60AD4) is opened in CSP+ profile creation support tool.

SLMP_Messa									
LABEL	LABEL2	CATEGORY	NAME	TARGET	ERR_CODE_RANGE	MESSAGE_TYPE	REQUEST_TYPE	ERR_CODE	REMARK
1	SLMPReadParameter		Parameter read	SEQ TARGET		PARAMETER			
2	SLMPBasicUnitReadPrm		Parameter read(Basic module)	BasicUnitParam.*		OTHER	rdReqMT Binary		
3	SLMPWriteParameter		Parameter write	SEQ TARGET		PARAMETER			
4	SLMPReflectPrm		Parameter reflect	CommCommandReflectPrmCommand		OTHER	wrReqMT Binary		
5	SLMPBasicUnitWritePrm		Parameter write(Basic module)	BasicUnitParam.*		OTHER	wrReqMT Binary		
6	WritePrmToCPU		Parameter auto-setting	SEQ TARGET		AUTO PARAMETER			
7	WritePrmToCPU1		Parameter auto-setting1	AUTOPARA UnitParam1.*		OTHER			
8	WritePrmToCPU2		Parameter auto-setting2	AUTOPARA UnitParam2.*		OTHER			
9	WritePrmToCPU3		Parameter auto-setting3	AUTOPARA UnitParam3.*		OTHER			
10	WritePrmToCPU4		Parameter auto-setting4	AUTOPARA UnitParam4.*		OTHER			
11	WritePrmToCPU5		Parameter auto-setting5	AUTOPARA UnitParam5.*		OTHER			
12	WritePrmToCPU6		Parameter auto-setting6	AUTOPARA UnitParam6.*		OTHER			
13	SLMPClearError		Error clear request	CommCommandClearErrorCommand		COMMAND	wrReqMT Binary		
14	SLMPClearErrorLog		Error history clear request	CommCommand.ErrorLogClearCommand		COMMAND	wrReqMT Binary		

SLMP_Message						
REQUEST_DATA	REQUEST_DATATYPE	RESPONSE_TYPE	RESPONSE_DATA	RESPONSE_DATATYPE	ERR_CODE	REMARK
<0x0613><0x0000><0x00000102><0x003A>	<WORD><WORD><DWORD><WORD>	rdResMT Binary	<\$(* VALUE)>	<\$(* DATATYPE)>		
<0x1613><0x0000><0x0000FFFF><0x0001><0xFFFE>	<WORD><WORD><DWORD><WORD><WORD>	wrResMT Binary	<WORD><WORD><DWORD><WORD><\$(* DATATYPE)>			
<0x00000102><0x0001><\$(* VALUE)>	<DWORD><WORD><\$(* DATATYPE)>					
<0x00000103><0x0001><\$(* VALUE)>	<DWORD><WORD><\$(* DATATYPE)>					
<0x00000105><0x0006><\$(* VALUE)>	<DWORD><WORD><\$(* DATATYPE)>					
<0x0000010F><0x0001><\$(* VALUE)>	<DWORD><WORD><\$(* DATATYPE)>					
<0x00000111><0x0011><\$(* VALUE)>	<DWORD><WORD><\$(* DATATYPE)>					
<0x00000133><0x0009><\$(* VALUE)>	<DWORD><WORD><\$(* DATATYPE)>					
<0x1617><0x0000>	<WORD><WORD>	wrResMT Binary				
<0x1619><0x0000>	<WORD><WORD>	wrResMT Binary				

Message			
ERR_TYPE	RELATED MESSAGE	COMMENT	REMARK
	<SEQ SLMPBasicUnitReadPrm>	The parameters are read from the target module.	
	<SEQ SLMPBasicUnitWritePrm><SEQ SLMPReflectPrm>	The parameters are written to the target module.	
	<SEQ WritePrmToCPU1><SEQ WritePrmToCPU2><SEQ WritePrmToCPU3><SEQ WritePrmToCPU4><SEQ WritePrmToCPU5><SEQ WritePrmToCPU6>	Set the parameters that support parameter auto-setting.	
		The error of the target module is cleared.	
		The error history of the target module is cleared.	

### (3) Utility software - ("Parameter of Slave Station" window/"Command Execution of Slave Station" window)

The following shows how the descriptions in the CSP+ for the analog-digital converter module (NZ2GN2B-60AD4) are displayed on the utility software. The following is a display example of utility software ("Parameter of Slave Station" window/"Command Execution of Slave Station" window).

Parameter of Slave Station

Target Module Information: NZ2GN2B-60DA4  
Start I/O No.:0000 - Station No.:3

Method selection: 4 Parameter read 16 The parameters are read from the target module.

Parameter Info: Parameter auto-setting

Select All Cancel All Selections Clear All "Read Value" Clear All "Write Value/Setting Value"  
Copy "Initial Value" to "Write Value/Setting Value" Copy "Read Value" to "Write Value/Setting Value"

Name	Initial Value	Unit	Read Value	Unit	Write Value/Setting ...	Unit	Setting Range	Description
<input checked="" type="checkbox"/> D/A conversion enable/disab...								
CH1 D/A conversion enabl...	Disable							Set D/A conver...
CH2 D/A conversion enabl...	Disable							Set D/A conver...
CH3 D/A conversion enabl...	Disable							Set D/A conver...
CH4 D/A conversion enabl...	Disable							Set D/A conver...
<input checked="" type="checkbox"/> Range setting								
CH1 Range setting	4~20mA							Set the output r...
CH2 Range setting	4~20mA							Set the output r...
CH3 Range setting	4~20mA							Set the output r...
CH4 Range setting	4~20mA							Set the output r...
<input checked="" type="checkbox"/> Analog output HOLD/CLEAR ...								
CH1 Analog output HOLD/CLEAR	CLEAR							Set the output l...

Process Option

There is no option in the selected process.

-The refreshed device values of remote I/O or remote registers may be overwritten.  
-Accesses the PLC CPU by using the current connection destination. Please check if there is any problem with the connection destination.  
-Process is executed according to the parameters written in the PLC CPU.  
-For information on items not displayed on the screen, please refer to the Operating Manual.

☐ Enable safety module when succeed to write parameter

Execute Parameter Processing

Import... Export... Close with Discarding the Setting Close with Reflecting the Setting

Command Execution of Slave Station

Target Module Information: NZ2GN2B-60DA4  
Start I/O No.:0000 - Station No.:3

Method selection: 4 Error clear request 16 The error of the target module is cleared.

Command Setting

There is no command setting in the selected process.

Execution Result

There is no execution result in the selected process.

-The refreshed device values of remote I/O or remote registers may be overwritten.  
-Accesses the PLC CPU by using the current connection destination. Please check if there is any problem with the connection destination.  
-Process is executed according to the parameters written in the PLC CPU.  
-For information on items not displayed on the screen, please refer to the Operating Manual.

Execute

Save in the CSV file... Close

(4) Items not being used on the utility software window despite being described in the CSP+ description specifications

Table 4.6-2 lists the items not being used on the utility software window despite being described in the CSP+ description specifications.

Table 4.6-2 Elements Not Being Used on the Utility Software Window (MESSAGE)

No.	Item	Application	Required/Optional
1	LABEL	Used as an identifier.	Required
2	LABEL2	Used as the second identifier to support multiple languages.	Optional
3	CATEGORY	Reference information. This element is displayed in CSP+ profile creation support tool.	Optional
5	TARGET	Used as information for identifying the reference information. When SEQ_TARGET is described, refer to Point below.	Required
6	MESSAGE_TYPE	Used to determine whether the data is to be displayed in the parameter settings of utility software, displayed at command execution, or not displayed. For details on the description of the element, refer to the following. Control & Communication System Profile Specification (BAP-C2008ENG-001) - 4.3.1.21 MESSAGE_TYPE conventions	Required
7	REQUEST_TYPE	Used to identify the data format type of the request frame.	*1
8	REQUEST_DATA	Used as the data value of the request frame.	Optional
9	REQUEST_DATATYPE	Used to identify the data type for all data in REQUEST_DATA.	Optional
10	RESPONSE_TYPE	Used to identify the frame type of the response frame.	Optional
11	RESPONSE_DATA	Used to identify the read data included in the response frame.	Optional
12	RESPONSE_DATA_TYPE	Used to identify the data type of the read data included in the response frame.	Optional
13	ERR_TYPE	Used to identify the data format included in the response frame when an error occurs.	Optional
14	ERR_CODE_RANGE	Used to compare an error code with an error code described in profile when an error occurs. When ENUM is used in ERR_CODE_RANGE, an error string corresponding the error code is displayed.	Optional
15	RELATED_MESSAGE	For details, refer to Point below.	Optional

\*1: Required when the item is described in SLMP MESSAGE.

In the case of MESSAGE other than SLMP, MESSAGE should be described according to each MESSAGE specifications. For details, refer to the following.

Control & Communication System Profile Specification (BAP-C2008ENG-001)

- 5.5.10.1 Parts and elements related to error related information

- 5.5.10.2 Convention related to MESSAGE for slave station parameter automatic setting

**Point**

When summarizing parameters in increments of processing to be executed (example: parameter read, parameter write), describe SEQ\_TARGET in this item.

Describe the part names, in which the listed parameters are defined, by bracketing off with "<", ">" in RELATED MESSAGE.

SLMP_Message x					
	LABEL	LABEL2	CATEGORY	NAME	TARGET
1	SLMPReadParameter			Parameter read	SEQ_TARGET
2	SLMPBasicUnitReadPrm			Parameter read(Basic module)	BasicUnitParam.*
3	SLMPWriteParameter			Parameter write	SEQ_TARGET
4	SLMPReflectPrm			Parameter reflect	CommCommand.ReflectPrmCommand
5	SLMPBasicUnitWritePrm			Parameter write(Basic module)	BasicUnitParam.*
6	WritePrmToCPU			Parameter auto-setting	SEQ_TARGET
7	WritePrmToCPU1			Parameter auto-setting1	AUTOPARA UnitParam1.*
8	WritePrmToCPU2			Parameter auto-setting2	AUTOPARA UnitParam2.*
9	WritePrmToCPU3			Parameter auto-setting3	AUTOPARA UnitParam3.*
10	WritePrmToCPU4			Parameter auto-setting4	AUTOPARA UnitParam4.*
11	WritePrmToCPU5			Parameter auto-setting5	AUTOPARA UnitParam5.*
12	WritePrmToCPU6			Parameter auto-setting6	AUTOPARA UnitParam6.*
13	SLMPClearError			Error clear request	CommCommand.ClearErrorCommand
14	SLMPClearErrorLog			Error history clear request	CommCommand.ErrorLogClearCommand

Page x	RELATED_MESSAGE	
	<SEQ SLMPBasicUnitReadPrm>	CT
	<SEQ SLMPBasicUnitWritePrm><SEQ SLMPReflectPrm>	TH
	<SEQ WritePrmToCPU1><SEQ WritePrmToCPU2><SEQ WritePrmToCPU3><SEQ WritePrmToCPU4><SEQ WritePrmToCPU5><SEQ WritePrmToCPU6>	S

LABEL	LABEL2	CATEGORY	NAME	TARGET	ERR_CODE_RANGE
1	SLMPReadParameter		Parameter read	SEQ TARGET	
2	SLMPBasicUnitReadPrm		Parameter read(Basic module)	BasicUnitParam.*	
3	SLMPWriteParameter		Parameter write	SEQ TARGET	
4	SLMPReflectPrm		Parameter reflect	CommCommand.ReflectPrmCommand	
5	SLMPBasicUnitWritePrm		Parameter write(Basic module)	BasicUnitParam.*	
6	WritePrmToCPU		Parameter auto-setting	SEQ TARGET	
7	WritePrmToCPU1		Parameter auto-setting1	AUTOPARA UnitParam1.*	
8	WritePrmToCPU2		Parameter auto-setting2	AUTOPARA UnitParam2.*	
9	WritePrmToCPU3		Parameter auto-setting3	AUTOPARA UnitParam3.*	
10	WritePrmToCPU4		Parameter auto-setting4	AUTOPARA UnitParam4.*	
11	WritePrmToCPU5		Parameter auto-setting5	AUTOPARA UnitParam5.*	
12	WritePrmToCPU6		Parameter auto-setting6	AUTOPARA UnitParam6.*	
13	SLMPClearError		Error clear request	CommCommand.ClearErrorCommand	
14	SLMPClearErrorLog		Error history clear request	CommCommand.ErrorLogClearCommand	

①

LABEL	LABEL2	CATEGORY	NAME	DATATYPE	DEFAULT	RANGE	MIN_INQ	ENG_UNIT	ACCESS	ASSIGN	UI_ATTRIBUTE	WRITE_ORDER	REF	COMMENT
1	ADConvSetting	Module parameter	A/D conversion enable/disable setting	STRUCT AD Conv set					RW	0x0000102				

②

LABEL	LABEL2	CATEGORY	NAME	DATATYPE	DEFAULT	RANGE	MIN_INQ	ENG_UNIT	ACCESS	ASSIGN	UI_ATTRIBUTE	WRITE_ORDER	REF	COMMENT	REMARK
1	RangeSetting	Module parameter	Range setting	STRUCT Range Set					RW	0x0000103					

③

LABEL	LABEL2	CATEGORY	NAME	DATATYPE	DEFAULT	RANGE	MIN_INQ	ENG_UNIT	ACCESS	ASSIGN	UI_ATTRIBUTE	WRITE_ORDER	REF	COMMENT	REMARK
1	AveSetting	Module parameter	Averaging process setting	STRUCT Ave Set					RW	0x0000105					

④

LABEL	LABEL2	CATEGORY	NAME	DATATYPE	DEFAULT	RANGE	MIN_INQ	ENG_UNIT	ACCESS	ASSIGN	UI_ATTRIBUTE	WRITE_ORDER	REF	COMMENT	REMARK
1	InputSigErrSetting	Module parameter	Input signal error detection function	STRUCT InputSigErr Set					RW	0x000010F					

⑤

LABEL	LABEL2	CATEGORY	NAME	DATATYPE	DEFAULT	RANGE	MIN_INQ	ENG_UNIT	ACCESS	ASSIGN	UI_ATTRIBUTE	WRITE_ORDER	REF	COMMENT	REMARK
1	WarningOutputSetting	Module parameter	Warning output function	STRUCT WarningOut Set					RW	0x0000111					

⑥

LABEL	LABEL2	CATEGORY	NAME	DATATYPE	DEFAULT	RANGE	MIN_INQ	ENG_UNIT	ACCESS	ASSIGN	UI_ATTRIBUTE	WRITE_ORDER	REF	COMMENT	REMARK
1	ScalingSetting	Module parameter	Scaling function	STRUCT Scal Set					RW	0x0000133					



Parameter of Slave Station

Target Module Information: N22GN2B-60DA4  
Start I/O No.:0000 - Station No.:3

Method selection: Parameter auto-setting Set the parameters that support parameter auto-setting. 1 2 3 4 5 6

Parameter In: Parameter auto-setting

Clear All "Read Value" Clear All "Write Value/Setting Value"

Copy "Read Value" to "Write Value/Setting Value"

Unit Write Value/Setting ... Unit Setting Range Description

<input type="checkbox"/>	CH1 D/A conversion enabl...	Disable					Set D/A conver...
<input type="checkbox"/>	CH2 D/A conversion enabl...	Disable					Set D/A conver...
<input type="checkbox"/>	CH3 D/A conversion enabl...	Disable					Set D/A conver...
<input type="checkbox"/>	CH4 D/A conversion enabl...	Disable					Set D/A conver...
<input checked="" type="checkbox"/>	Range setting						
<input type="checkbox"/>	CH1 Range setting	4~20mA					Set the output r...
<input type="checkbox"/>	CH2 Range setting	4~20mA					Set the output r...
<input type="checkbox"/>	CH3 Range setting	4~20mA					Set the output r...
<input type="checkbox"/>	CH4 Range setting	4~20mA					Set the output r...
<input checked="" type="checkbox"/>	Analog output HOLD/CLEAR ...						
<input type="checkbox"/>	CH1 Analog output HOLD/CLEAR	CLEAR					Set the output f...

Process Option

There is no option in the selected process.

The value set in write value/setting value is set to slave station automatically by Slave Station Parameter Automatic Setting function.  
- For information on items not displayed on the screen, please refer to the Operating Manual.

☐ Enable safety module when succeed to write parameter

Execute Parameter Processing

Import... Export... Close with Discarding the Setting Close with Reflecting the Setting

	Name	Initial Value	Unit	Read Value	Unit	Write Value/Setting ...	Unit	Setting Range	Description
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">1</span>	<input checked="" type="checkbox"/> D/A conversion enable/disable								
	CH1 D/A conversion enable/disable	Disable							Set D/A conversion to "enable" or "disable".
	CH2 D/A conversion enable/disable	Disable							Set D/A conversion to "enable" or "disable".
	CH3 D/A conversion enable/disable	Disable							Set D/A conversion to "enable" or "disable".
	CH4 D/A conversion enable/disable	Disable							Set D/A conversion to "enable" or "disable".
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">2</span>	<input checked="" type="checkbox"/> Range setting								
	CH1 Range setting	4~20mA							Set the output range.
	CH2 Range setting	4~20mA							Set the output range.
	CH3 Range setting	4~20mA							Set the output range.
	CH4 Range setting	4~20mA							Set the output range.
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">3</span>	<input checked="" type="checkbox"/> Analog output HOLD/CLEAR								
	CH1 Analog output HOLD/CLEAR	CLEAR							Set the output HOLD/CLEAR.
	CH2 Analog output HOLD/CLEAR	CLEAR							Set the output HOLD/CLEAR.
	CH3 Analog output HOLD/CLEAR	CLEAR							Set the output HOLD/CLEAR.
	CH4 Analog output HOLD/CLEAR	CLEAR							Set the output HOLD/CLEAR.
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">4</span>	<input checked="" type="checkbox"/> Analog output HOLD/CLEAR								
	CH1 Analog output HOLD/CLEAR	CLEAR							Set the output HOLD/CLEAR.
	CH2 Analog output HOLD/CLEAR	CLEAR							Set the output HOLD/CLEAR.
	CH3 Analog output HOLD/CLEAR	CLEAR							Set the output HOLD/CLEAR.
	CH4 Analog output HOLD/CLEAR	CLEAR							Set the output HOLD/CLEAR.
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">5</span>	<input checked="" type="checkbox"/> Warning output function								
	CH1 Warning output setting	Disable							Set warning output to "enable" or "disable".
	CH1 Warning output upper ...	0						-32768 to 32767	Set an upper limit value of the digital input value for warning output. Set value as the upper limit value > the lower limit value.
	CH1 Warning output lower ...	0						-32768 to 32767	Set a lower limit value of the digital input value for warning output. Set value as the upper limit value > the lower limit value.
	CH2 Warning output setting	Disable							Set warning output to "enable" or "disable".
	CH2 Warning output upper ...	0						-32768 to 32767	Set an upper limit value of the digital input value for warning output. Set value as the upper limit value > the lower limit value.
	CH2 Warning output lower ...	0						-32768 to 32767	Set a lower limit value of the digital input value for warning output. Set value as the upper limit value > the lower limit value.
	CH3 Warning output setting	Disable							Set warning output to "enable" or "disable".
	CH3 Warning output upper ...	0						-32768 to 32767	Set an upper limit value of the digital input value for warning output. Set value as the upper limit value > the lower limit value.
	CH3 Warning output lower ...	0						-32768 to 32767	Set a lower limit value of the digital input value for warning output. Set value as the upper limit value > the lower limit value.
	CH4 Warning output setting	Disable							Set warning output to "enable" or "disable".
	CH4 Warning output upper ...	0						-32768 to 32767	Set an upper limit value of the digital input value for warning output. Set value as the upper limit value > the lower limit value.
	CH4 Warning output lower ...	0						-32768 to 32767	Set a lower limit value of the digital input value for warning output. Set value as the upper limit value > the lower limit value.
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">6</span>	<input checked="" type="checkbox"/> Scaling function								
	CH1 Scaling enable/disable	Disable							Set scaling to "enable" or "disable".
	CH1 Scaling upper limit val.	0						-32000 to 32000	Set an upper limit value for the scaling conversion. Set value as the upper limit value > the lower limit value.
	CH1 Scaling lower limit val.	0						-32000 to 32000	Set a lower limit value for the scaling conversion. Set value as the upper limit value > the lower limit value.
	CH2 Scaling enable/disable	Disable							Set scaling to "enable" or "disable".
	CH2 Scaling upper limit val.	0						-32000 to 32000	Set an upper limit value for the scaling conversion. Set value as the upper limit value > the lower limit value.
	CH2 Scaling lower limit val.	0						-32000 to 32000	Set a lower limit value for the scaling conversion. Set value as the upper limit value > the lower limit value.
	CH3 Scaling enable/disable	Disable							Set scaling to "enable" or "disable".
	CH3 Scaling upper limit val.	0						-32000 to 32000	Set an upper limit value for the scaling conversion. Set value as the upper limit value > the lower limit value.
	CH3 Scaling lower limit val.	0						-32000 to 32000	Set a lower limit value for the scaling conversion. Set value as the upper limit value > the lower limit value.
	CH4 Scaling enable/disable	Disable							Set scaling to "enable" or "disable".
	CH4 Scaling upper limit val.	0						-32000 to 32000	Set an upper limit value for the scaling conversion. Set value as the upper limit value > the lower limit value.
	CH4 Scaling lower limit val.	0						-32000 to 32000	Set a lower limit value for the scaling conversion. Set value as the upper limit value > the lower limit value.

## 5. BLOCK SECTION

The BLOCK section consists of multiple parts as shown in Figure 5-1.

BLOCK section	
BLOCK_INFO part	Describes the identification information of the function block.
BLOCK_INPUT part	Describes the input information of the function block.
BLOCK_OUTPUT part	Describes the output information of the function block.
BLOCK_PARAMETER part	Describes the parameter information of the function block.
BLOCK_COMMAND part	Describes the command to be executed in the function block.
STRUCT part	Describes the structure of the inputs and outputs of multiple elements.
ENUM part	Describes the options for values and return values to be set for the element.
COMMAND_ARGUMENT part	Describes the argument information of BLOCK_COMMAND.

Figure 5-1 Structure of the BLOCK Section

## 5.1 BLOCK\_INFO Part

The BLOCK\_INFO part describes the information related to the identification of the function block.

Basically, the elements described in the BLOCK\_INFO part are not displayed on utility software. The configuration of each element of the BLOCK\_INFO part, that is, the items to be described in each element, is the same.

### (1) Control & Communication System Profile Specification (BAP-C2008ENG-001) - 5.4.1 BLOCK\_INFO part

Table 5.1-1 lists the elements which configure the BLOCK\_INFO part.

**Table 5.1-1 List of Elements which Configure the BLOCK\_INFO Part**

No.	Element	Description	Required/Optional
1	VendorName	Describes the name of the vendor that manufactured the module.	Required
2	VendorCode	Describes the code of vendor that manufactured the module. The membership number (fifth to eighth digits) of the CC-Link Partner Association is described.	Required
3	Version	Describe the firmware version in a string.	Required

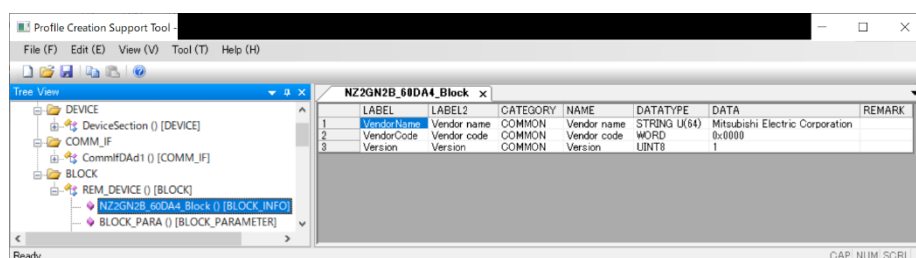
Table 5.1-2 lists the items to be described in each element of the BLOCK\_INFO part.

**Table 5.1-2 List of Items to be Described in Each Element of the BLOCK\_INFO Part**

No.	Item	Description	Required/Optional
1	LABEL	Describes the label for identifying the element.	Required
2	LABEL2	Describes the label for identifying the element. (This item is used when the utility software supports other languages.)	Optional
3	CATEGORY	Describes the category for grouping the element.	Optional
4	NAME	Describes the element name. This item is used when displaying the element name or descriptions on utility software.	Optional
5	DATATYPE	Describes the data type of the information described in DATA.	Optional
6	DATA	Describes the element information.	Required

### (2) CSP+ descriptions

Figure 5.1-1 shows a display example of the BLOCK\_INFO part when the CSP+ for the analog-digital converter module (NZ2GN2B-60AD4) is opened in CSP+ profile creation support tool.



**Figure 5.1-1 Display Example When CSP+ Profile Creation Support Tool is Used (BLOCK\_INFO)**

### (3) Utility software

This section is omitted because the description in the BLOCK\_INFO part is not displayed on utility software.

## 5.2 BLOCK\_INPUT Part

The BLOCK\_INPUT part describes the information related to the input of the function block. The information includes the remote output RY area and remote register RWw area of the remote station.

Elements configuring the BLOCK\_INPUT part are defined based on the functions of the target module.

The configuration of each element of the BLOCK\_INPUT part, that is, the items to be described in each element, is the same.

### (1) Control & Communication System Profile Specification (BAP-C2008ENG-001) - 5.4.2 BLOCK\_INPUT part

Table 5.2-1 lists the items to be described in each element of the BLOCK\_INPUT part.

**Table 5.2-1 List of Items to be Described in Each Element of the BLOCK\_INPUT Part**

No.	Item	Description	Required/ Optional
1	LABEL	Describes the label for identifying the element.	Required
2	LABEL2	Describes the label for identifying the element. (This item is used when the utility software supports other languages.)	Optional
3	CATEGORY	Describes the category for grouping the element.	Optional
4	NAME	Describes the element name. This item is used when displaying the name or descriptions on utility software.	Required
5	DATATYPE	Describes the data type of the element.	Required
6	DEFAULT	Describes the default to be set for the element.	Optional
7	RANGE	Describes the setting range of the element.	Optional
8	MIN_INC	Describes the minimum increment applied to the value of the item along with ENG_UNIT. When ENG_UNIT is described, this item is required.	Optional
9	ENG_UNIT	Describes the engineering unit applied to the value of the item along with MIN_INC.	Optional
10	ACCESS	Describes the access attribute of the element.	Optional
11	UI_ATTRIBUTE	Describes the display method when the element is displayed on utility software.	Optional
12	COMMENT	Describes the meaning of the element and usage precautions.	Optional

### (2) CSP+ descriptions

Parameters are referenced in the following order.

COMM\_IF\_OUTPUT part (CommIfOutput) →

BLOCK\_INPUT part (BlockInput)

\* Omitted because there is no item description example for CSP+ and utility software.

### 5.3 BLOCK\_OUTPUT Part

The BLOCK\_OUTPUT part describes the information related to the output of the function block. The information includes the remote input RX area and remote register RWr area of the remote station.

Elements configuring the BLOCK\_OUTPUT part are defined based on the functions of the target module.

The configuration of each element of the BLOCK\_OUTPUT part, that is, the items to be described in each element, is the same.

#### (1) Control & Communication System Profile Specification (BAP-C2008ENG-001) - 5.4.3 BLOCK\_OUTPUT part

Table 5.3-1 lists the items to be described in each element of the BLOCK\_OUTPUT part.

Table 5.3-1 List of Items which Configure the BLOCK\_OUTPUT Part

No.	Item	Description	Required/ Optional
1	LABEL	Describes the label for identifying the element.	Required
2	LABEL2	Describes the label for identifying the element. (This item is used when the utility software supports other languages.)	Optional
3	CATEGORY	Describes the category for grouping the element.	Optional
4	NAME	Describes the element name. This item is used when displaying the name or descriptions on utility software.	Required
5	DATATYPE	Describes the data type of the element.	Required
6	DEFAULT	Describes the default to be set for the element.	Optional
7	RANGE	Describes the setting range of the element.	Optional
8	MIN_INC	Describes the minimum increment applied to the value of the item along with ENG_UNIT. When ENG_UNIT is described, this item is required.	Optional
9	ENG_UNIT	Describes the engineering unit applied to the value of the item along with MIN_INC.	Optional
10	ACCESS	Describes the access attribute of the element.	Optional
12	UI_ATTRIBUTE	Describes the display method when the element is displayed on utility software.	Optional
13	COMMENT	Describes the meaning of the element and usage precautions.	Optional

#### (2) CSP+ descriptions

Parameters are referenced in the following order.

COMM\_IF\_INPUT part (CommIfInput) →

BLOCK\_OUTPUT part (BlockOutput)

\* Omitted because there is no item description example for CSP+ and utility software.

## 5.4 BLOCK\_PARAMETER Part

The BLOCK\_PARAMETER part describes the information related to the parameters used by the control functions of the target module.

Elements configuring the BLOCK\_PARAMETER part are defined based on the communication functions of the target module.

### (1) Control & Communication System Profile Specification (BAP-C2008ENG-001) - 5.4.4 BLOCK\_PARAMETER part

#### 1) Items to be described in the BLOCK\_PARAMETER part

Table 5.4-1 lists the items to be described in each element of the BLOCK\_PARAMETER part.

**Table 5.4-1 List of Items to be Described in Each Element of the BLOCK\_PARAMETER Part**

No.	Item	Description	Required/ Optional
<b>1</b>	LABEL	Describes the label for identifying the element.	Required
<b>2</b>	LABEL2	Describes the label for identifying the element. (This item is used when the utility software supports other languages.)	Optional
<b>3</b>	CATEGORY	Describes the category for grouping the element.	Optional
<b>4</b>	NAME	Describes the element name. This item is used when displaying the name or descriptions on utility software.	Required
<b>5</b>	DATATYPE	Describes the data type of the element.	Required
<b>6</b>	DEFAULT	Describes the default to be set for the element.	Optional
<b>7</b>	RANGE	Describes the setting range of the element. Options can be described by using the ENUM part. <b>3</b>	Optional
<b>8</b>	MIN_INC	Describes the minimum increment applied to the value of the item along with ENG_UNIT. When ENG_UNIT is described, this item is required.	Optional
<b>9</b>	ENG_UNIT	Describes the engineering unit applied to the value of the item along with MIN_INC.	Optional
<b>10</b>	ACCESS	Describes the access attribute of the element.	Required
<b>11</b>	WRITE_ORDER	Describes the order in which the element is to be described to the module.	Optional
<b>12</b>	UI_ATTRIBUTE	Describes the display method when the element is displayed on utility software.	Optional
<b>13</b>	COMMENT	Describes the meaning of the element and usage precautions.	Optional

**\*3 ENUM part**

The ENUM part (option list) describes the information related to options of values and return values to be set to the element. To set options for elements using a list box or to display the meaning of each value of elements when they are read on utility software, refer to the ENUM part.

When referencing a description of the ENUM part from an element in the COMM\_IF section, describe the ENUM part in the same COMM\_IF section.

Elements configuring the ENUM part are defined based on the option of values to be used in the target module.

The configuration of each element of the ENUM part, that is, the items to be described in each element, is the same.

**Table 5.4-2 List of Items to Be Defined in the ENUM Part**

No.	Element	Description	Required/ Optional
<b>1'</b>	LABEL	Describes the label for identifying the element.	Required
<b>2'</b>	LABEL2	Describes the label for identifying the element. (This item is used when the utility software supports other languages.)	Optional
<b>3'</b>	CATEGORY	Describes the category for grouping the element.	Optional
<b>4'</b>	NAME	Describes the element name. This item is used when displaying the name or descriptions on utility software.	Required
<b>5'</b>	CODE	Describes the value for identifying the element. This item is cross-checked with the value indicated by the element of the reference source in order to select matching elements.	Required
<b>6'</b>	RELATED_ELE	Describes the element information by referencing the command argument list.	Optional
<b>7'</b>	COMMENT1	Describes the meaning of the element and usage precautions.	Optional
<b>8'</b>	COMMENT2	Describes the meaning of the element and usage precautions.	Optional

2) Reference specifications of the BLOCK\_PARAMETER part

For specifications of the parts related to the BLOCK\_PARAMETER part and reference relationship between communication services, refer to Section 4.4(1) 2).

## (2) CSP+ descriptions

Parameters are referenced in the following order.

MESSAGE part (SLMP\_Message) →

COMM\_IF\_PARAMETER part (BasicUnitParam) →

STRUCT part (Range\_Set) →

BLOCK\_PARAMETER part (BLOCK\_PARA)

The following shows a display example of the BLOCK\_PARAMETER part when the CSP+ for the analog-digital converter module (NZ2GN2B-60AD4) is opened in CSP+ profile creation support tool.

SLMP\_Message x

"Part name.\*" indicates that all Labels of the reference part are referenced.

LABEL	LABEL2	CATEGORY	NAME	STRUCT TARGET	ERR_CODE_R
1	SLMPReadParameter		Parameter read	BasicUnitParam.*	
2	SLMPBasicUnitReadPrm		Parameter read(Basic module)	SEQ TARGET	
3	SLMPWriteParameter		Parameter write	CommCommand.ReflectPrmCommand	
4	SLMPReflectPrm		Parameter reflect	BasicUnitParam.*	
5	SLMPBasicUnitWritePrm		Parameter write(Basic module)	SEQ TARGET	
6	WritePrmToCPU		Parameter auto-setting	AUTOPARA UnitParam1*	
7	WritePrmToCPU1		Parameter auto-setting1	AUTOPARA UnitParam2*	
8	WritePrmToCPU2		Parameter auto-setting2	AUTOPARA UnitParam3*	
9	WritePrmToCPU3		Parameter auto-setting3	AUTOPARA UnitParam4*	
10	WritePrmToCPU4		Parameter auto-setting4	AUTOPARA UnitParam5*	
11	WritePrmToCPU5		Parameter auto-setting5	AUTOPARA UnitParam6*	
12	WritePrmToCPU6		Parameter auto-setting6	CommCommand.ClearErrorCommand	
13	SLMPClearError		Error clear request	CommCommand.ErrorLogClearCommand	
14	SLMPClearErrorLog		Error history clear request		

Reference

MESSAGE Part

BasicUnitParam x

LABEL	LABEL2	CATEGORY	NAME	DATATYPE	DEFAULT	RANGE	MIN_INC	ENG_UNIT	ACCESS	ASSIGN	ULATTR
1	ADConvSetting	Moudle parameter	A/D conversion enable/disable setting	STRUCT ADConvSet					RW	0x0000102	
2	RangeSetting	Moudle parameter	Range setting	STRUCT Range Set					RW	0x0000103	
3	Const1	Moudle parameter	Const1	CONST WORD	0x0000				RW	0x0000104	
4	AveSetting	Moudle parameter	Averaging process setting	STRUCT Ave Set					RW	0x0000105	
5	Const2	Moudle parameter	Const2	CONST WORD	0x0000				RW	0x0000106	
6	Const3	Moudle parameter	Const3	CONST WORD	0x0000				RW	0x000010C	
7	Const4	Moudle parameter	Const4	CONST WORD	0x0000				RW	0x000010D	
8	Const5	Moudle parameter	Const5	CONST WORD	0x0000				RW	0x000010E	
9	InputSigErrSetting	Moudle parameter	Input signal error detection function	STRUCT InputSigErr Set					RW	0x000010F	
10	Const6	Moudle parameter	Const6	CONST WORD	0x0000				RW	0x0000110	
11	WarningOutputSetting	Moudle parameter	Warning output function	STRUCT WarningOut Set					RW	0x0000111	
12	Const7	Moudle parameter	Const7	CONST WORD	0x0000				RW	0x0000122	
13	Const8	Moudle parameter	Const8	CONST WORD	0x0000				RW	0x0000123	
14	Const9	Moudle parameter	Const9	CONST WORD	0x0000				RW	0x0000124	
15	Const10	Moudle parameter	Const10	CONST WORD	0x0000				RW	0x0000125	
16	Const11	Moudle parameter	Const11	CONST WORD	0x0000				RW	0x0000126	
17	Const12	Moudle parameter	Const12	CONST WORD	0x0000				RW	0x0000127	
18	Const13	Moudle parameter	Const13	CONST WORD	0x0000				RW	0x0000128	
19	Const14	Moudle parameter	Const14	CONST WORD	0x0000				RW	0x0000129	
20	Const15	Moudle parameter	Const15	CONST WORD	0x0000				RW	0x000012A	
21	Const16	Moudle parameter	Const16	CONST WORD	0x0000				RW	0x000012B	
22	Const17	Moudle parameter	Const17	CONST WORD	0x0000				RW	0x000012C	
23	Const18	Moudle parameter	Const18	CONST WORD	0x0000				RW	0x000012D	
24	Const19	Moudle parameter	Const19	CONST WORD	0x0000				RW	0x000012E	
25	Const20	Moudle parameter	Const20	CONST WORD	0x0000				RW	0x000012F	
26	Const21	Moudle parameter	Const21	CONST WORD	0x0000				RW	0x0000130	
27	Const22	Moudle parameter	Const22	CONST WORD	0x0000				RW	0x0000131	
28	Const23	Moudle parameter	Const23	CONST WORD	0x0000				RW	0x0000132	
29	ScalingSetting	Moudle parameter	Scaling function	STRUCT Scal Set					RW	0x0000133	

Reference

COMM\_IF\_PARAMETER part

SLMP\_Message BasicUnitParam Range\_Set x

LABEL	LABEL2	CATEGORY	NAME	DATATYPE	DEFAULT	RANGE	MIN_INC	ENG_UNIT	OFFSET	REF	COMMENT
1	CH1 RangeSetting	Range setting	CH1 Range setting	BIT STRING4					0.0	REM DEVICE.BLOCK PARACH1 RangeSetting	
2	CH2 RangeSetting	Range setting	CH2 Range setting	BIT STRING4					0.4	REM DEVICE.BLOCK PARACH2 RangeSetting	
3	CH3 RangeSetting	Range setting	CH3 Range setting	BIT STRING4					0.8	REM DEVICE.BLOCK PARACH3 RangeSetting	
4	CH4 RangeSetting	Range setting	CH4 Range setting	BIT STRING4					0.C	REM DEVICE.BLOCK PARACH4 RangeSetting	

STRUCT part

Reference

\*9



1	2	3	4	5	6	7	8
BLOCK PARA	LABEL	CATEGORY	NAME	DATATYPE	DEFAULT	RANGE	MIN_VAL
1 CH1 ADConversionSetting	CH1 AD conversion enable/disable setting	A/D conversion enable/disable setting	CH1 A/D conversion enable/disable setting	BOOL	0	ENUM EnableOFF DisableON	
2 CH2 ADConversionSetting	CH2 AD conversion enable/disable setting	A/D conversion enable/disable setting	CH2 A/D conversion enable/disable setting	BOOL	0	ENUM EnableOFF DisableON	
3 CH3 ADConversionSetting	CH3 AD conversion enable/disable setting	A/D conversion enable/disable setting	CH3 A/D conversion enable/disable setting	BOOL	0	ENUM EnableOFF DisableON	
4 CH4 ADConversionSetting	CH4 AD conversion enable/disable setting	A/D conversion enable/disable setting	CH4 A/D conversion enable/disable setting	BOOL	0	ENUM EnableOFF DisableON	
5 CH1 RangeSetting	CH1 Range setting	Range setting	CH1 Range setting	BIT STRING4	0x0	ENUM RangeSet	
6 CH2 RangeSetting	CH2 Range setting	Range setting	CH2 Range setting	BIT STRING4	0x0	ENUM RangeSet	
7 CH3 RangeSetting	CH3 Range setting	Range setting	CH3 Range setting	BIT STRING4	0x0	ENUM RangeSet	
8 CH4 RangeSetting	CH4 Range setting	Range setting	CH4 Range setting	BIT STRING4	0x0	ENUM RangeSet	
9 CH1 AveragingProcessSetting	CH1 Averaging process setting	Averaging process setting	CH1 Averaging process setting	BIT STRING4	0x0	ENUM AveProcess Set	
10 CH2 AveragingProcessSetting	CH2 Averaging process setting	Averaging process setting	CH2 Averaging process setting	BIT STRING4	0x0	ENUM AveProcess Set	
11 CH3 AveragingProcessSetting	CH3 Averaging process setting	Averaging process setting	CH3 Averaging process setting	BIT STRING4	0x0	ENUM AveProcess Set	
12 CH4 AveragingProcessSetting	CH4 Averaging process setting	Averaging process setting	CH4 Averaging process setting	BIT STRING4	0x0	ENUM AveProcess Set	
13 CH1 AveragingProcessSettingValue	CH1 Time average/Count average/Moving average	Averaging process setting	CH1 Time average/Count average/Moving average	UINT16	0	[0,5000]	
14 CH2 AveragingProcessSettingValue	CH2 Time average/Count average/Moving average	Averaging process setting	CH2 Time average/Count average/Moving average	UINT16	0	[0,5000]	
15 CH3 AveragingProcessSettingValue	CH3 Time average/Count average/Moving average	Averaging process setting	CH3 Time average/Count average/Moving average	UINT16	0	[0,5000]	
16 CH4 AveragingProcessSettingValue	CH4 Time average/Count average/Moving average	Averaging process setting	CH4 Time average/Count average/Moving average	UINT16	0	[0,5000]	
17 CH1 InputSigErrorSignalSetting	CH1 Input signal error detection function	Input signal error detection function	CH1 Input signal error detection setting	BIT STRING4	0x0	ENUM InputSigErr Set	
18 CH2 InputSigErrorSignalSetting	CH2 Input signal error detection function	Input signal error detection function	CH2 Input signal error detection setting	BIT STRING4	0x0	ENUM InputSigErr Set	
19 CH3 InputSigErrorSignalSetting	CH3 Input signal error detection function	Input signal error detection function	CH3 Input signal error detection setting	BIT STRING4	0x0	ENUM InputSigErr Set	
20 CH4 InputSigErrorSignalSetting	CH4 Input signal error detection function	Input signal error detection function	CH4 Input signal error detection setting	BIT STRING4	0x0	ENUM InputSigErr Set	
21 CH1 WarningOutputSetting	CH1 Warning output function	Warning output function	CH1 Warning output setting	BOOL	1	ENUM EnableOFF DisableON	
22 CH2 WarningOutputSetting	CH2 Warning output function	Warning output function	CH2 Warning output setting	BOOL	1	ENUM EnableOFF DisableON	
23 CH3 WarningOutputSetting	CH3 Warning output function	Warning output function	CH3 Warning output setting	BOOL	1	ENUM EnableOFF DisableON	
24 CH4 WarningOutputSetting	CH4 Warning output function	Warning output function	CH4 Warning output setting	BOOL	1	ENUM EnableOFF DisableON	
25 CH1 ProcessAlarmLowLow	CH1 Process alarm lower lower limit value	Warning output function	CH1 Process alarm lower lower limit value	INT16	0	[-2768,32767]	
26 CH1 ProcessAlarmLowUp	CH1 Process alarm lower upper limit value	Warning output function	CH1 Process alarm lower upper limit value	INT16	0	[-2768,32767]	
27 CH1 ProcessAlarmUpLow	CH1 Process alarm upper lower limit value	Warning output function	CH1 Process alarm upper lower limit value	INT16	0	[-2768,32767]	
28 CH1 ProcessAlarmUpUp	CH1 Process alarm upper upper limit value	Warning output function	CH1 Process alarm upper upper limit value	INT16	0	[-2768,32767]	
29 CH2 ProcessAlarmLowLow	CH2 Process alarm lower lower limit value	Warning output function	CH2 Process alarm lower lower limit value	INT16	0	[-2768,32767]	
30 CH2 ProcessAlarmLowUp	CH2 Process alarm lower upper limit value	Warning output function	CH2 Process alarm lower upper limit value	INT16	0	[-2768,32767]	
31 CH2 ProcessAlarmUpLow	CH2 Process alarm upper lower limit value	Warning output function	CH2 Process alarm upper lower limit value	INT16	0	[-2768,32767]	
32 CH2 ProcessAlarmUpUp	CH2 Process alarm upper upper limit value	Warning output function	CH2 Process alarm upper upper limit value	INT16	0	[-2768,32767]	
33 CH3 ProcessAlarmLowLow	CH3 Process alarm lower lower limit value	Warning output function	CH3 Process alarm lower lower limit value	INT16	0	[-2768,32767]	
34 CH3 ProcessAlarmLowUp	CH3 Process alarm lower upper limit value	Warning output function	CH3 Process alarm lower upper limit value	INT16	0	[-2768,32767]	
35 CH3 ProcessAlarmUpLow	CH3 Process alarm upper lower limit value	Warning output function	CH3 Process alarm upper lower limit value	INT16	0	[-2768,32767]	
36 CH3 ProcessAlarmUpUp	CH3 Process alarm upper upper limit value	Warning output function	CH3 Process alarm upper upper limit value	INT16	0	[-2768,32767]	
37 CH4 ProcessAlarmLowLow	CH4 Process alarm lower lower limit value	Warning output function	CH4 Process alarm lower lower limit value	INT16	0	[-2768,32767]	
38 CH4 ProcessAlarmLowUp	CH4 Process alarm lower upper limit value	Warning output function	CH4 Process alarm lower upper limit value	INT16	0	[-2768,32767]	

BLOCK\_PARAMETER part (1/2)

9	10	11	12	13
ENG_UNIT	ACCESS	UL_ATTRIBUTE	WRITE_ORDER	COMMENT
	RW			Set A/D conversion to "enable" or "disable".
	RW			Set A/D conversion to "enable" or "disable".
	RW			Set A/D conversion to "enable" or "disable".
	RW			Set A/D conversion to "enable" or "disable".
	RW			Set the input range.
	RW			Set the input range.
	RW			Set the input range.
	RW			Set "Sampling processing" or "Averaging processing".
	RW			Set "Sampling processing" or "Averaging processing".
	RW			Set "Sampling processing" or "Averaging processing".
	RW			Set "Sampling processing" or "Averaging processing".
	RW			Set the time average (ms), count average (times), moving average count (times).
	RW			Set the time average (ms), count average (times), moving average count (times).
	RW			Set the time average (ms), count average (times), moving average count (times).
	RW			Set the time average (ms), count average (times), moving average count (times).
	RW			Set a condition for detecting an error.
	RW			Set a condition for detecting an error.
	RW			Set a condition for detecting an error.
	RW			Set a condition for detecting an error.
	RW			Set warning output to "enable" or "disable".
	RW			Set warning output to "enable" or "disable".
	RW			Set warning output to "enable" or "disable".
	RW			Set warning output to "enable" or "disable".
	RW			Set a lower lower limit value of the digital operation value.
	RW			Set a lower upper limit value of the digital operation value.
	RW			Set an upper lower limit value of the digital operation value.
	RW			Set an upper upper limit value of the digital operation value.
	RW			Set a lower lower limit value of the digital operation value.
	RW			Set a lower upper limit value of the digital operation value.
	RW			Set an upper lower limit value of the digital operation value.
	RW			Set an upper upper limit value of the digital operation value.
	RW			Set a lower lower limit value of the digital operation value.
	RW			Set a lower upper limit value of the digital operation value.
	RW			Set an upper lower limit value of the digital operation value.
	RW			Set an upper upper limit value of the digital operation value.

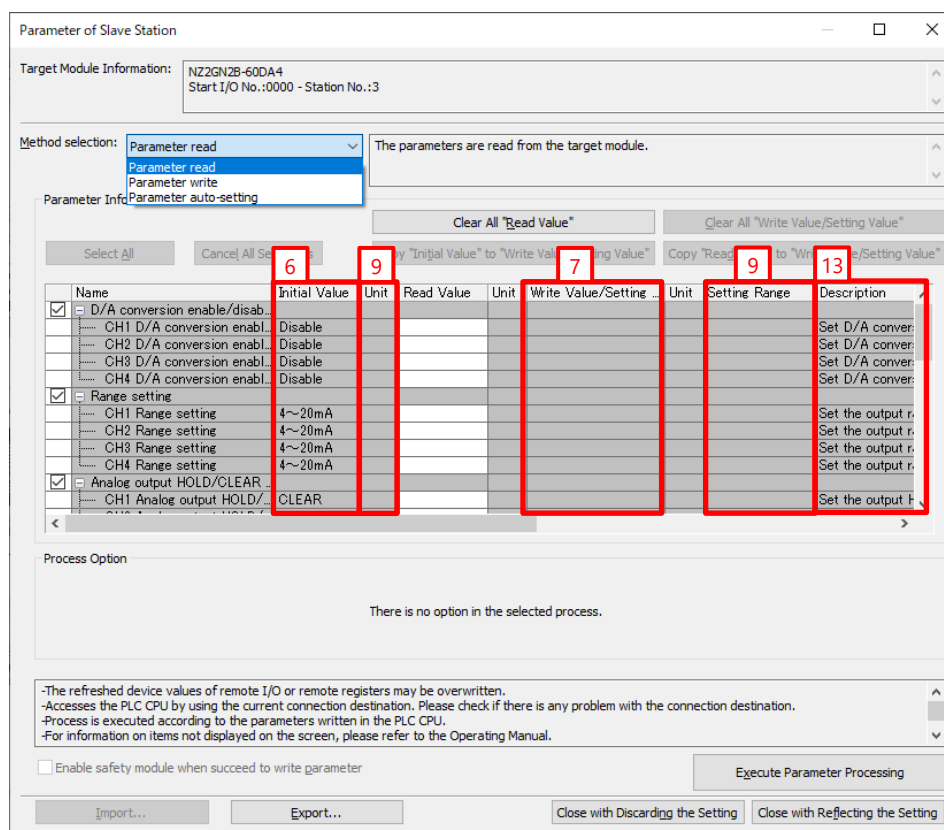
BLOCK\_PARAMETER part (2/2)

1'	2'	3'	4'	5'	6'	7'	8'
LABEL	LABEL2	CATEGORY	NAME	CODE	RELATED_ELE	COMMENT1	COMMENT2
1 Range 4 20mA			4~20mA	0x0			
2 Range 0 20mA			0~20mA	0x1			
3 Range 1 5V			1~5V	0x2			
4 Range 0 5V			0~5V	0x3			
5 Range 10 10V			-10~10V	0x4			
6 Range 0 10V			0~10V	0x5			

ENUM part

### (3) Utility software ("Parameter of Slave Station" window)

The following shows how the descriptions in the CSP+ for the analog-digital converter module (NZ2GN2B-60AD4) are displayed on the utility software. The following is a display example of utility software ("Parameter of Slave Station" window).



### (4) Elements not being used on the utility software window despite being described in the CSP+ description specifications

Table 5.4-3 lists the elements not being used on the utility software window despite being described in the CSP+ description specifications.

**Table 5.4-3 Elements Not Being Used on the Utility Software Window (BLOCK\_PARAMETER, ENUM)**

No.	Element	Application	Required/Optional
1 1'	LABEL	Used as an identifier.	Required
2 2'	LABEL2	Describes the label for identifying the element. (This item is used when the utility software supports other languages.)	Optional
3 3'	CATEGORY	Reference information. This element is displayed only in CSP+ profile creation support tool.	Optional
5	DATATYPE	Used to check the data type.	Required
8	MIN_INC	Uses the numerical value in which the user input value is multiplied by the value described in MIN_INC during internal processing.	Optional
10	ACCESS	Used to identify the access information of the target item: "Readable", "Writable", "Readable and writable", "Auto refreshable", and "Element not accessible". * For details on the description of the element, refer to the following. Control & Communication System Profile Specification (BAP-C2008ENG-001) - 4.3.1.1 ACCESS conventions	Required
11	WRITE_ORDER	Used as sequence information when writing parameters to the actual device. (Values are written in ascending order.)	Optional
12	UI_ATTRIBUTE	For future expansion	Optional
5'	CODE	Used to identify the selected value.	Required

## 5.5 BLOCK\_COMMAND Part

The BLOCK\_COMMAND part describes the information related to the commands executed by the control functions of the target module.

Elements configuring the BLOCK\_COMMAND part are defined based on the functions of the target module.

### (1) Control & Communication System Profile Specification (BAP-C2008ENG-001) - 5.4.5 BLOCK\_COMMAND part

#### 1) Items to be described in the BLOCK\_COMMAND part

Table 5.5-1 lists the items to be described in each element of the BLOCK\_COMMAND part.

**Table 5.5-1 List of Items to be Described in Each Element of the BLOCK\_COMMAND Part**

No.	Item	Description	Required/ Optional
<b>1</b>	LABEL	Describes the label for identifying the element.	Required
<b>2</b>	LABEL2	Describes the label for identifying the element. (This item is used when the utility software supports other languages.)	Optional
<b>3</b>	CATEGORY	Describes the category for grouping the element.	Optional
<b>4</b>	NAME	Describes the element name. This item is used when displaying the name or descriptions on utility software.	Required
<b>5</b>	ARGUMENT	Describes LABEL of the COMMAND_ARGUMENT part for indicating the argument to be used by the element.	Required
<b>6</b>	COMMENT	Describes the meaning of the element and usage precautions.	Optional

#### **\*4** COMMAND\_ARGUMENT part

The COMMAND\_ARGUMENT part (command argument list) describes the information related to command arguments.

**Table 5.5-2 List of Elements to be Defined in the COMMAND\_ARGUMENT Part**

No.	Element	Description	Required/ Optional
<b>1'</b>	LABEL	Describes the label for identifying the element.	Required
<b>2'</b>	LABEL2	Describes the label for identifying the element. (This item is used when the utility software supports other languages.)	Optional
<b>3'</b>	CATEGORY	Describes the category for grouping the element.	Optional
<b>4'</b>	NAME	Describes the element name. This item is used when displaying the name or descriptions on utility software.	Required
<b>5'</b>	DATATYPE	Describes the data type of the element.	Required
<b>6'</b>	DEFAULT	Describes the default to be set for the element.	Optional
<b>7'</b>	RANGE	Describes the setting range of the element.	Optional
<b>8'</b>	MIN_INC	Describes the minimum increment applied to the value of the element in the command argument list along with ENG_UNIT.	Optional
<b>9'</b>	ENG_UNIT	Describes the engineering unit applied to the value of the element in the command argument list along with MIN_INC.	Optional
<b>10'</b>	ACCESS	Describes the access attribute of the element.	Required
<b>11'</b>	ASSIGN	Describes the address and code to be assigned to the element.	Optional
<b>12'</b>	REF	Describes the reference to be referenced by the element. Use of this item is prohibited under the current specifications.	Optional
<b>13'</b>	COMMENT	Describes the meaning of the element and usage precautions.	Optional

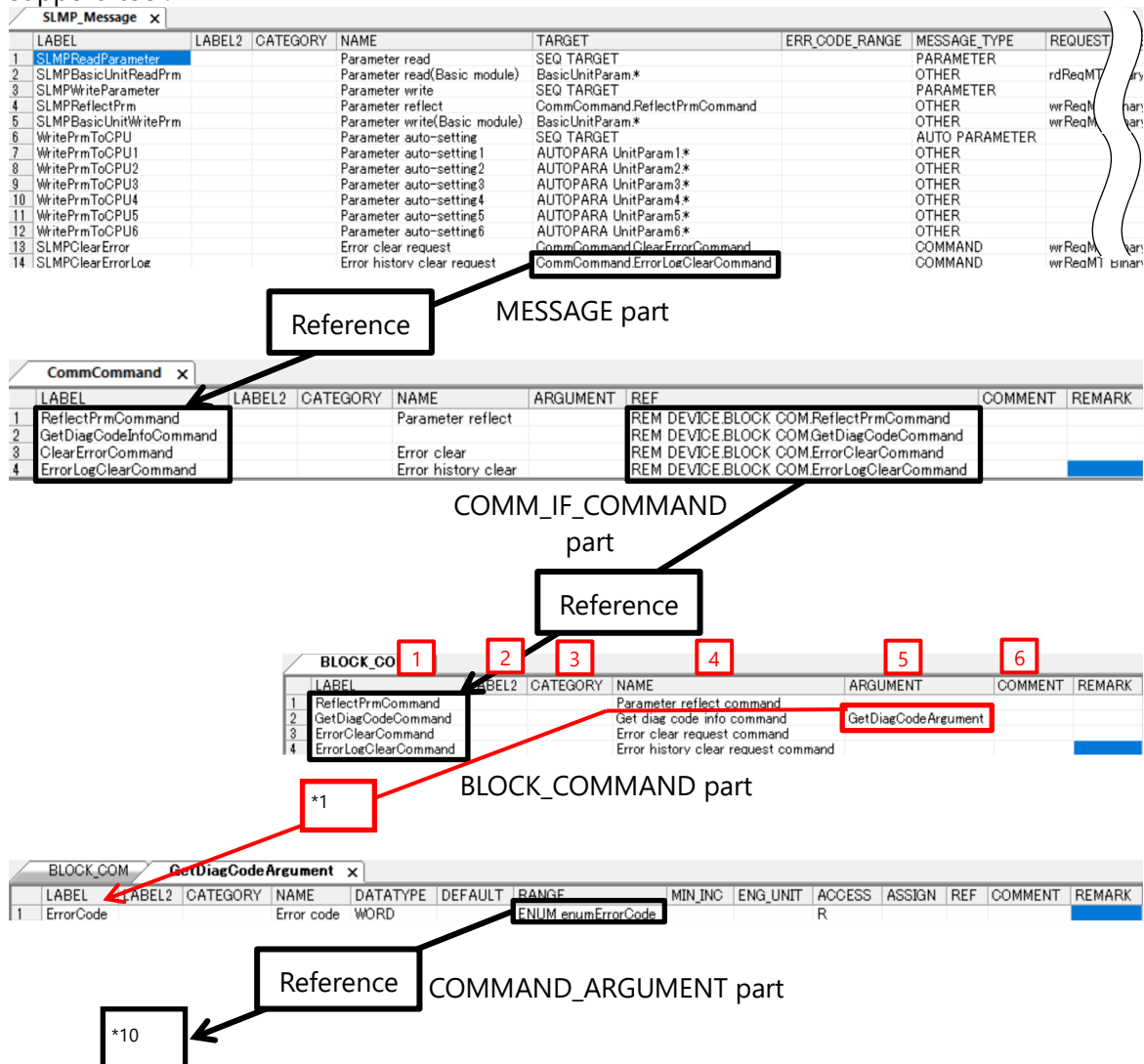
- 2) Reference specifications of the BLOCK\_COMMAND part  
 For specifications of the parts related to the BLOCK\_COMMAND part and reference relationship between communication services, refer to Section 4.5(1) 2).

## (2) CSP+ descriptions

Parameters are referenced in the following order.

MESSAGE part (SLMP\_Message) →  
 COMM\_IF\_PARAMETER part (CommCommand) →  
 BLOCK\_COMMAND part (BLOCK\_COM)  
 COMMAND\_ARGUMENT part (GetDiagCodeArgument)  
 ENUM part (enumErrorCode)  
 COMMAND\_ARGUMENT part (Error\_1043)

The following shows a display example of the BLOCK\_COMMAND part when the CSP+ for the analog-digital converter module (NZ2GN2B-60AD4) is opened in CSP+ profile creation support tool.



\*10

enumErrorCode x					
LABEL	LABEL2	CATEGORY	NAME	CODE	RELATED ELE
1	Err1020		Remote buffer memory access error	0x1020	Error 1020
2	Err1030		IP address/station number setting switch changed error	0x1030	Error 1030
3	Err1041		Function setting switch 1 changed error	0x1041	Error 1041
4	Err1042		Function setting switch 2 changed error	0x1042	Error 1042
5	Err1043		Function setting switch 3 changed error	0x1043	Error 1043
6	Err1044		Function setting switch 4 changed error	0x1044	Error 1044
7	Err1045		Function setting switch 5 changed error	0x1045	Error 1045
8	Err1046		Function setting switch 6 changed error	0x1046	Error 1046
9	Err1047		Function setting switch 7 changed error	0x1047	Error 1047
10	Err1048		Function setting switch 8 changed error	0x1048	Error 1048
11	Err1049		Function setting switch 9 changed error	0x1049	Error 1049
12	Err104A		Function setting switch 10 changed error	0x104A	Error 104A
13	Err1050		Error of error history storage limitation	0x1050	Error 1050
14	Err1051		Error of IP address storage limitation	0x1051	Error 1051
15	Err1052		Error of module parameter storage limitation	0x1052	Error 1052
16	Err1060		Non-volatile memory access error (error history)	0x1060	Error 1060
17	Err1061		Non-volatile memory access error (IP address)	0x1061	Error 1061
18	Err1062		Non-volatile memory access error (module parameter)	0x1062	Error 1062
19	Err1080		Module power supply voltage drop error	0x1080	Error 1080
20	Err1090		Remote reset not possible error	0x1090	Error 1090
21	Err2010		Non-volatile memory data error (parameter)	0x2010	Error 2010
22	Err2011		Non-volatile memory data error (IP address)	0x2011	Error 2011
23	Err2400		Outside IP address/station number setting switch range error (IP address)	0x2400	Error 2400
24	Err3101		CH1 Range setting out of the range	0x3101	Error 3100
25	Err3102		CH2 Range setting out of the range	0x3102	Error 3100
26	Err3103		CH3 Range setting out of the range	0x3103	Error 3100
27	Err3104		CH4 Range setting out of the range	0x3104	Error 3100
28	Err3201		CH1 Time average setting out of the range	0x3201	Error 3200
29	Err3202		CH2 Time average setting out of the range	0x3202	Error 3200
30	Err3203		CH3 Time average setting out of the range	0x3203	Error 3200
31	Err3204		CH4 Time average setting out of the range	0x3204	Error 3200
32	Err3211		CH1 Count average setting out of the range	0x3211	Error 3210
33	Err3212		CH2 Count average setting out of the range	0x3212	Error 3210
34	Err3213		CH3 Count average setting out of the range	0x3213	Error 3210
35	Err3214		CH4 Count average setting out of the range	0x3214	Error 3210
36	Err3221		CH1 Moving count setting out of the range	0x3221	Error 3220
37	Err3222		CH2 Moving count setting out of the range	0x3222	Error 3220
38	Err3223		CH3 Moving count setting out of the range	0x3223	Error 3220

ENUM part

Reference

1'	2'	3'	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'
LABEL	LABEL2	CATEGORY	NAME	DATATYPE	DEFAULT	RANGE	MIN_VAL	ENG_UNIT	ACCESS	ASSIGN	REF	COMMENT
1	detail1	Detailed Information 1	IP address/station number setting switch status	UINT16					R			

COMMAND\_ARGUMENT part

### (3) Utility software ("Error History" window)

The following shows how the descriptions in the CSP+ for the analog-digital converter module (NZ2GN2B-60AD4) are displayed on the utility software. The following is a display example of utility software ("Error History" window).

Error History Start I/O: 0 Station No.:1 NZ2GN2S-60AD4

Selected Station Information  
 Network No. 1 Station No. 1 IP Address 192.168.3.1 Delete Error History

Error History List

No. Error Details

1 Function setting switch 1 changed error

2 IP address setting switch changed error

Error codes stored in error history logs are searched from CODE items in the ENUM part (ErrorCode) and the description of the NAME items where the element is matched is displayed.

Error codes stored in error history logs are searched from CODE items in the ENUM part (ErrorCode) and the description of the COMMENT1 items where the element is matched is displayed.

Error codes stored in error history logs are searched from CODE items in the ENUM part (ErrorCode) and the description of the COMMENT2 items where the element is matched is displayed.

Name	Read Value	Explanation
Error Code	0x1041	
Error Details	The function setting switch 1 has been changed...	
Solution Methods	Return function setting switch 1 to the setting...	
Occurrence Date	5/30/2019 5:21:25 780 AM	
4' Function setting switch ... 1	5' 7'	9' 13'

Close

(4) Items not being used on the utility software window despite being described in the CSP+ description specifications

Table 5.5-3 lists the items not being used on the utility software window despite being described in the CSP+ description specifications.

**Table 5.5-3 Items Not Being Used on the Utility Software Window (BLOCK\_COMMAND, COMMAND\_ARGUMENT)**

No.	Item	Application	Required/ Optional
1 1'	LABEL	Used as an identifier.	Required
2 2'	LABEL2	Describes the label for identifying the element. (This item is used when the utility software supports other languages.)	Optional
3 3'	CATEGORY	Reference information. This item is displayed only in CSP+ profile creation support tool.	Optional
6	COMMENT	Reference information. This item is displayed only in CSP+ profile creation support tool.	Optional
8'	MIN_INC	Uses the numerical value in which the user input value is multiplied by the value described in MIN_INC during internal processing.	Optional
10'	ACCESS	Used to identify the access information of the target item: "Readable", "Writable", "Readable and writable", "Auto refreshable", and "Element not accessible". For details on the description of the element, refer to the following. Control & Communication System Profile Specification (BAP-C2008ENG-001) - 4.3.1.1 ACCESS conventions	Required
11'	ASSIGN	Used to analyze the address and code assigned to the element.	Optional
12'	REF	Used to identify the reference relationship.	Optional



