General Specifications

VP6F3100
Project I/O License

CENTUM VP

GS 33J15A10-01EN

[Release 6]

■ GENERAL

*Project I/O license is an essential license to manage I/Os in a VP project. The number of project I/O licenses is determined by the number of process I/Os and communication I/Os used in the VP project. (*1)*
The project I/O License is applicable to the FCSs below:

AFV30S, AFV30D, AFV40S, AFV40D, A2FV50S, A2FV50D, A2FV70S, and A2FV70D

*1: When using the test function in a simulation environment, a project I/O license is not required.

■ FUNCTIONAL SPECIFICATIONS

The number of project I/O licenses is based on the number of logical I/O points calculated by the numbers of process I/Os and communication I/Os separately.

200 logical I/O points are equivalent to one project I/O license.

The number of logical I/O points divided by 200 is the required number of project I/O licenses. If there is a surplus when divided, one additional project I/O license is required.

● Calculating the Number of Logical I/O Points

The number of logical I/O points is counted by each module in the following manners: however, redundancy in the I/O modules is not counted.

Logical I/O points = Logical I/O points of process I/Os + Logical I/O points of communication I/Os

Logical I/O points of Process I/Os

The number of logical I/O points of process I/Os in the VP project is calculated as follows.

Logical I/O points of process I/Os
= Σ (The number of physical I/O terminals of analog I/O modules)
+ Σ (The number of physical I/O terminals of digital I/O modules)
+ Σ (The number of physical I/O terminals of analog digital I/O modules)
+ Σ (Logical I/O points of ALF111 modules)
+ Σ (Logical I/O points of A2LP141 modules)
+ Σ (PROFINET physical I/O points (Ethernet-APL, Remote I/O) of A2LP141 modules)

- Analog I/O modules, Digital I/O modules, Analog digital I/O modules
  The number of physical I/O terminals is counted as the logical I/O points intactly.
- Foundation fieldbus communication module (ALF111)
  ALF111 is counted as 32 points for the logical I/O points per module.
- PROFINET communication module (A2LP141) (*1)
  A2LP141 is counted as the sum of the logical I/O points, which is 250 points per module, and PROFINET physical I/O points (Ethernet-APL, Remote I/O).

  The number of PROFINET physical I/O points (Ethernet-APL, Remote I/O) is calculated using the following formula according to the number of input points and output points of the PA Profile compatible device only, and is added to the number of logical I/O points.

  PROFINET physical I/O points (Ethernet-APL, Remote I/O)
  = (number of input points x 1 + number of output points x 2) x α

  Input points: Input points for PA Profile compatible device
  Output points: Output points for PA Profile compatible device.
  α: When connecting to a PA Profile compatible device, α is 3.

*1: Supported by CENTUM VP R6.11.10 or later.
The PROFINET communication module (A2LP131) is counted as "communication I/Os" and the PROFINET communication module (A2LP141) is counted as "process I/Os".

Logical I/O points of Communication I/Os

(1) Method-1

Logical I/O points calculation method for CENTUM VP R6.01 to R6.04.

Logical I/O points of communication I/Os = Σ (communication I/O points) (*1) / 4

(2) Method-2

Logical I/O points calculation method for CENTUM VP R6.05 or later.

Logical I/O points of communication I/Os = Σ (Quasi logical I/O points of each communication I/O module) - 100 (*2)

*1: The number of real communication I/Os is counted per word (16 points delimitation).

*2: Maximum 100 is subtracted from the total number of quasi communication I/O points of ALE111, ALP1☐1, ALR1☐1, and A2LP131. PROFINET communication module (A2LP141) is counted as "process I/Os" and is therefore not subject to subtraction.

Quasi logical I/O points are shown in the table below.

Model	Name	Quasi logical I/O points
ALE111	Ethernet communication module	250
ALP111, ALP121	PROFIBUS-DP communication module	250
ALR111, ALR121	Serial communication module	180
AGP813	Turbomachinery high speed protection module	40
AGS813	Turbomachinery servo module	50
A2LP131 (*1)	PROFINET communication module	250

*1: Supported by CENTUM VP R6.07.00 or later.

However, when revision update from R6.01 - R6.04 to R6.05, the method-1 is kept continuously.

● Checking the Number of Logical I/O Points

When online or offline downloading any project data to FCS, the number of logical I/O points is checked whether it is within the number of points allocated by the project I/O licenses. If the number of logical I/O points exceeds the number of points allocated by the project I/O licenses, downloading is not performed correctly. When using the test function in a simulation environment, the number of logical I/O points is not checked.

● Confirming the Number of Logical I/O Points

The number of points allocated by the project I/O licenses and the number of logical I/O points in the VP project can be confirmed on the FCS resource information dialog in the System View. The number of logical I/O points for each FCS can also be confirmed on the dialog.

■ MODELS AND SUFFIX CODES

		Description
Model	VP6F3100	Project I/O License
Suffix Codes	-V	Software license
	1	always 1
	1	English version

Note: The project I/O license is applicable to 200 logical I/O points per license.

■ ORDERING INFORMATION

Specify model and suffix codes.

■ TRADEMARK ACKNOWLEDGMENT

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