



Programmable Controllers
MELSEC iQ-R
series



Ezi-IO® CC-Link IE TSN
Network Input/Output **DIO**

Connection Guide

MELSEC iQ-R series RJ71GN11-T2 and **Ezi-IO**® CC-Link IE TSN
Network Input/Output **DIO**

Mitsubishi Electric Products
RJ71GN11-T2

FASTECH Products
Ezi-IO CC-Link IE TSN **DIO**, Ezi-IO CC-Link IE TSN **AD**, Ezi-IO CC-Link IE TSN **DA**, Ezi-IO CC-Link IE TSN **CNT**

Before You Begin

- Thank you for using our company's product.
- The Ezi-IO DIO CC-Link IE TSN is an industrial product. Do not use it for any other purpose. We assume no liability for any damages resulting from a violation of this instruction.
- This connection guide provided by our company explains how to connect the Ezi-IO DIO CC-Link IE TSN to the Mitsubishi Electric MELSEC iQ-R RJ71GN11-T2. It covers CSP+ file registration, system configuration, parameter settings, and programming methods.
- Before creating a PLC program, be sure to read this connection guide and use the product correctly after fully understanding its contents.
- This connection guide is subject to change without notice. If you need the latest version, please refer to our CC-Link IE TSN website (<https://cltsn.fastech-motions.com/en>).

Manual Information

- The Ezi-IO DIO CC-Link IE TSN manual can be downloaded from the FASTECH website.

<https://cltsn.fastech-motions.com/en/download/quick>

Manual Name	Manual Number
[Manual][CC-Link IE TSN][Ezi-IO DIO] Digital Input Output Module	
[Connection Guide][CC-Link IE TSN][MELSEC RJ71GN11-T2][Ezi-IO DIO]	

- The MELSEC iQ-R RJ71GN11-T2 manual can be downloaded from the Mitsubishi Electric website.

<https://www.mitsubishielectric.com/fa/index.html>

Manual Title	Manual Number
MELSEC iQ-R CC-Link IE TSN User's Manual (Startup Edition)	SH-082126-Q
MELSEC iQ-R CC-Link IE TSN User's Manual (Advanced)	SH-082128-S
MELSEC iQ-R Unit Configuration Manual	SH-081222-AV
MELSEC iQ-R Programming Manual (Motion Unit Instructions/General-Purpose FUN/General-Purpose FB)	IB-0300430
MELSEC iQ-R Programming Manual (Motion Control FB Edition)	IB-0300532
GX Works3 Operating Manual	SH-081214

Terminology

- This section covers the terminology used in the connection guide.

Terminology	Content
CC-Link IE TSN	An open network that adopts 'TSN (Time-Sensitive Networking),' an extension of the standard Ethernet specification, enabling simultaneous processing of real-time control and information from other open networks.
Master Station (Manager Station)	This station manages the entire network and can perform cyclic and transient transmission with all stations. The MELSEC MX controller corresponds to this category.
Remote Station	A station that performs cyclic transmission of bit-level I/O signals and word-level I/O data, and is also capable of transient transmission. The Ezi-SERVO CC-Link IE TSN corresponds to this.
PDO	Abbreviation for Process Data Object. A collection of application objects that are periodically transmitted between multiple CANopen nodes.
Object	Various data held by device stations corresponding to CANopen.

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1. Overview

1-1. Overview

- **MELSEC iQ-R RJ71GN11-T2 and Ezi-IO DIO CC-Link IE TSN Connection Guide**

- ◆ **Master Station: RJ71GN11-T2**

- ◆ **Engineering Software**

- GX Works3: Ver. 1.105K or later
- Motion Control Configuration Function: Ver. 1.055H or later
- * For the latest files, please visit the Mitsubishi Electric website.

(<https://www.mitsubishielectric.com/fa/download/index.html>)

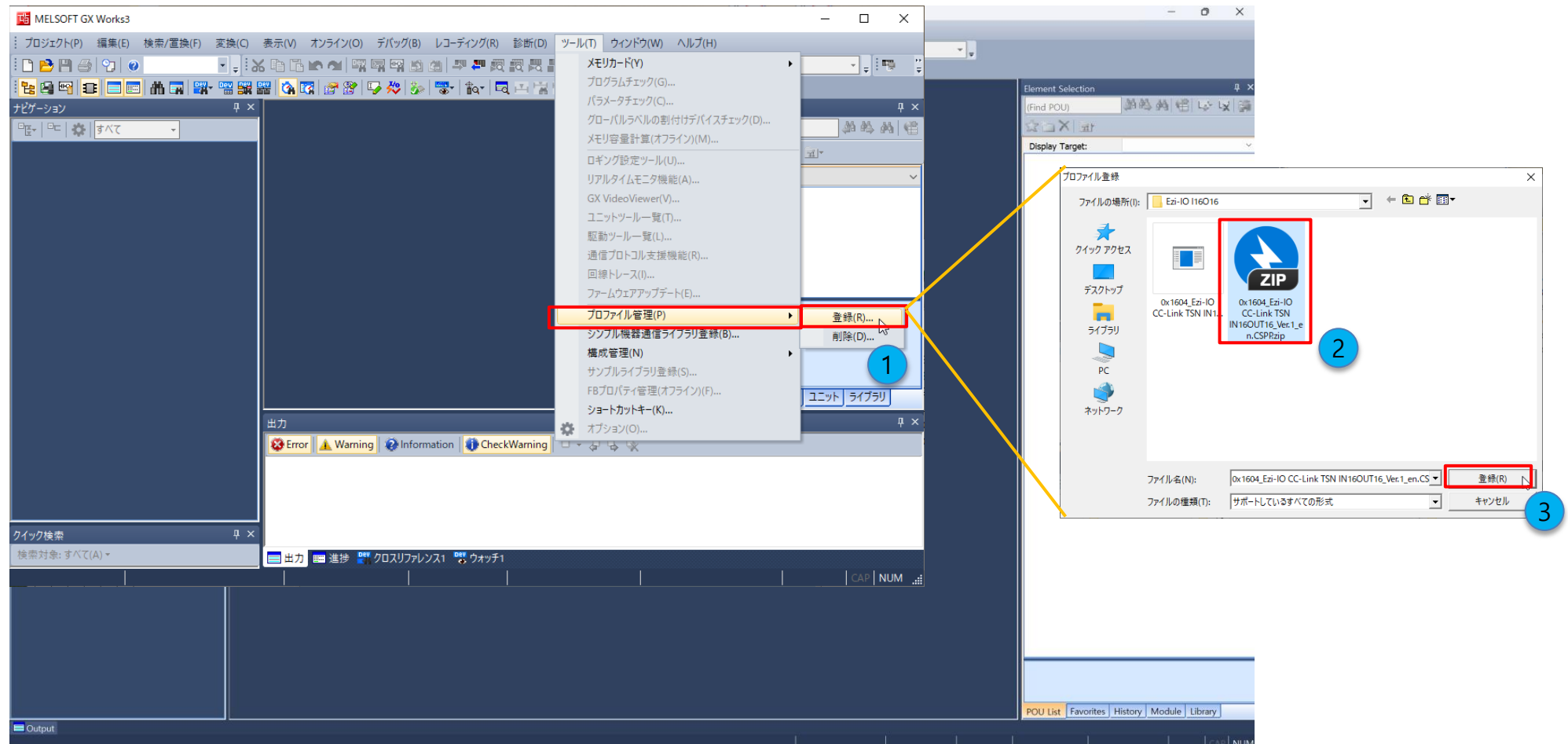
- ◆ **Remote Station: Ezi-IO DIO CC-Link IE TSN**

- CSP+ File Download Address: <https://cltsn.fastech-motions.com/en/download/quick>
- File name: [CSP][Ezi-IO] CT_DIO_1_en_CSPP.zip

1-2. Ezi-IO CC-Link IE TSN DIO CSP+ File Registration

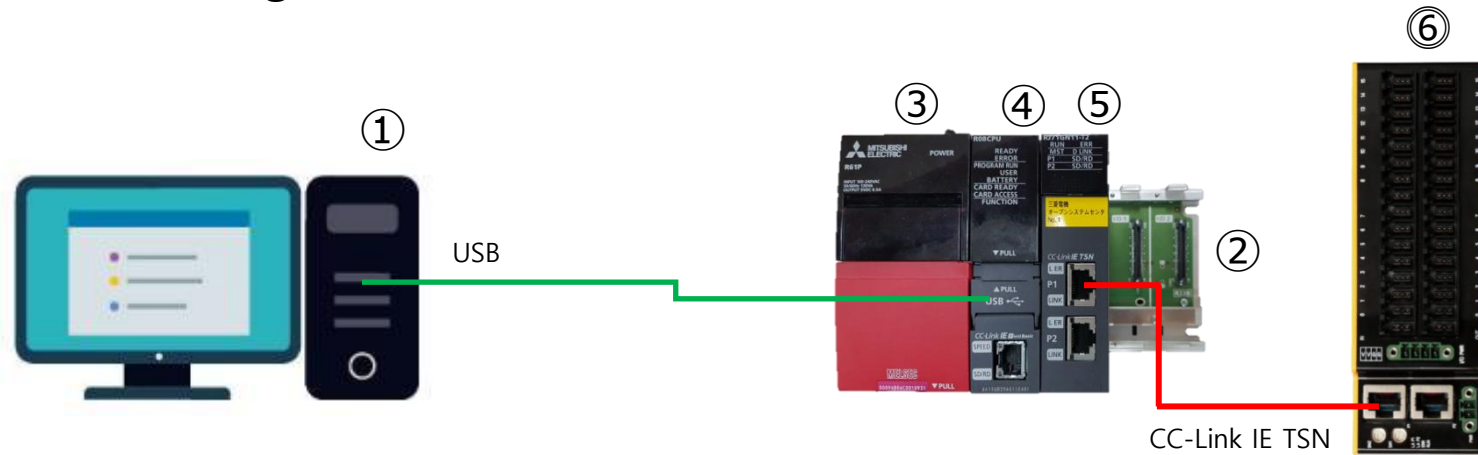
● CSP+ Registration

- [GX Works3] Tool / Profile Management / Register * You can only register before opening a project.



1-3. CC-Link IE TSN Configuration

- System Configuration



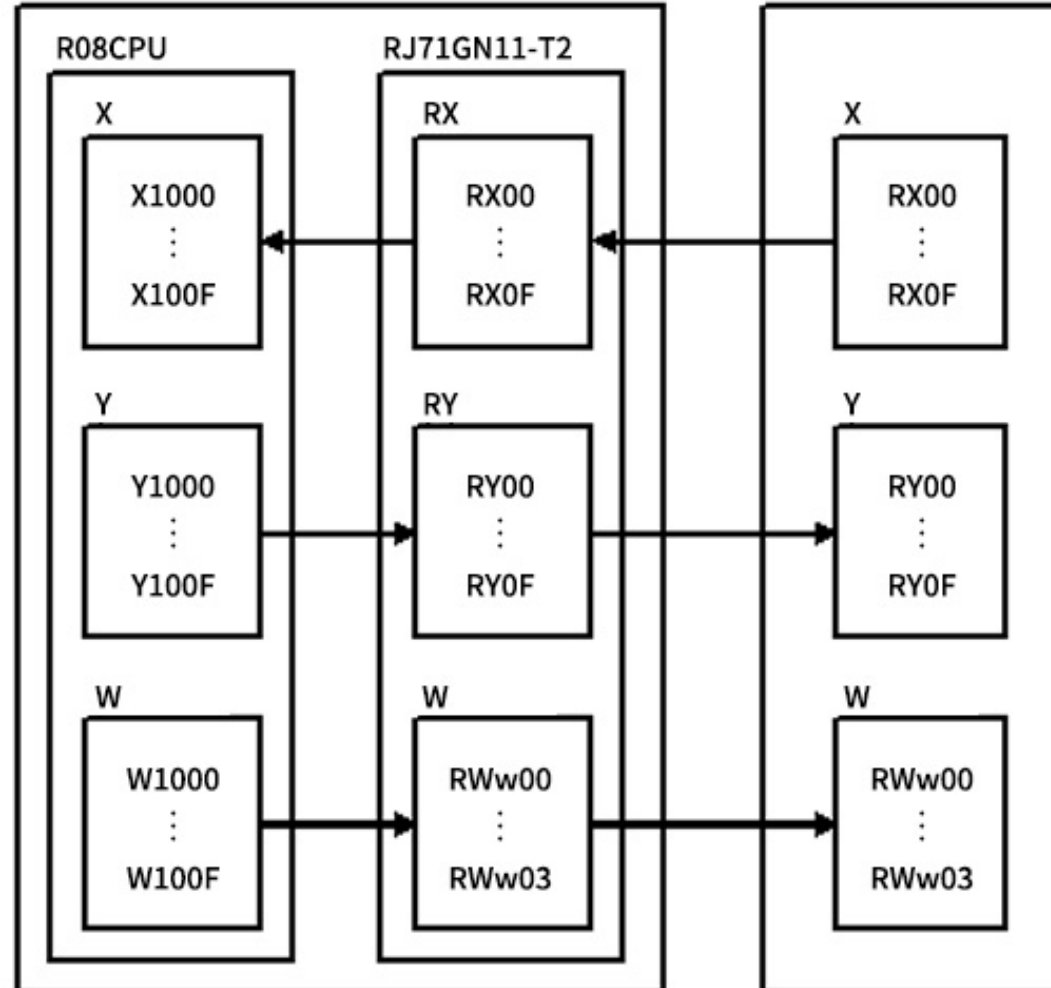
Configuration		Product Name	IP Address
①	Engineering Software	GX Works3	-
②	Basic Platform	R33B	-
③	Power Module	R61P	-
④	CPU Module	iQ-R04	-
⑤	CC-Link IE TSN Master/Local Unit	RJ71GN11-T2	192.168.3.253
⑥	I/O Module	Ezi-IO-CT-I16O16N-E	192.168.3.1

1-3. CC-Link IE TSN Configuration

- Example: System Link Device Assignment

マスタ局

Ezi-IO CC-Link IE
TSN IN16OUT16



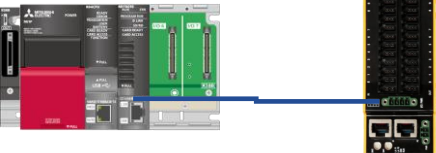
1-3. CC-Link IE TSN Configuration

● Ezi-SERVO Specifications

Communication Method	CC-Link IE TSN
Physical Layer	Ethernet – 100BASE-TX
Connector	RJ45 LA P1/LA P2
Station Type	Remote Device Station
Authentication Class	Class B
Data Rate	1 Gbps
Link Topology	• Line connection, star connection, or a combination of star and line connections • Ring configuration
Connection Cable	STP (Shielded Twisted Pair) cable, Category 5e or higher / Maximum length 100 m
Communication Method	CC-Link IE TSN

1-4. Configuration Flow

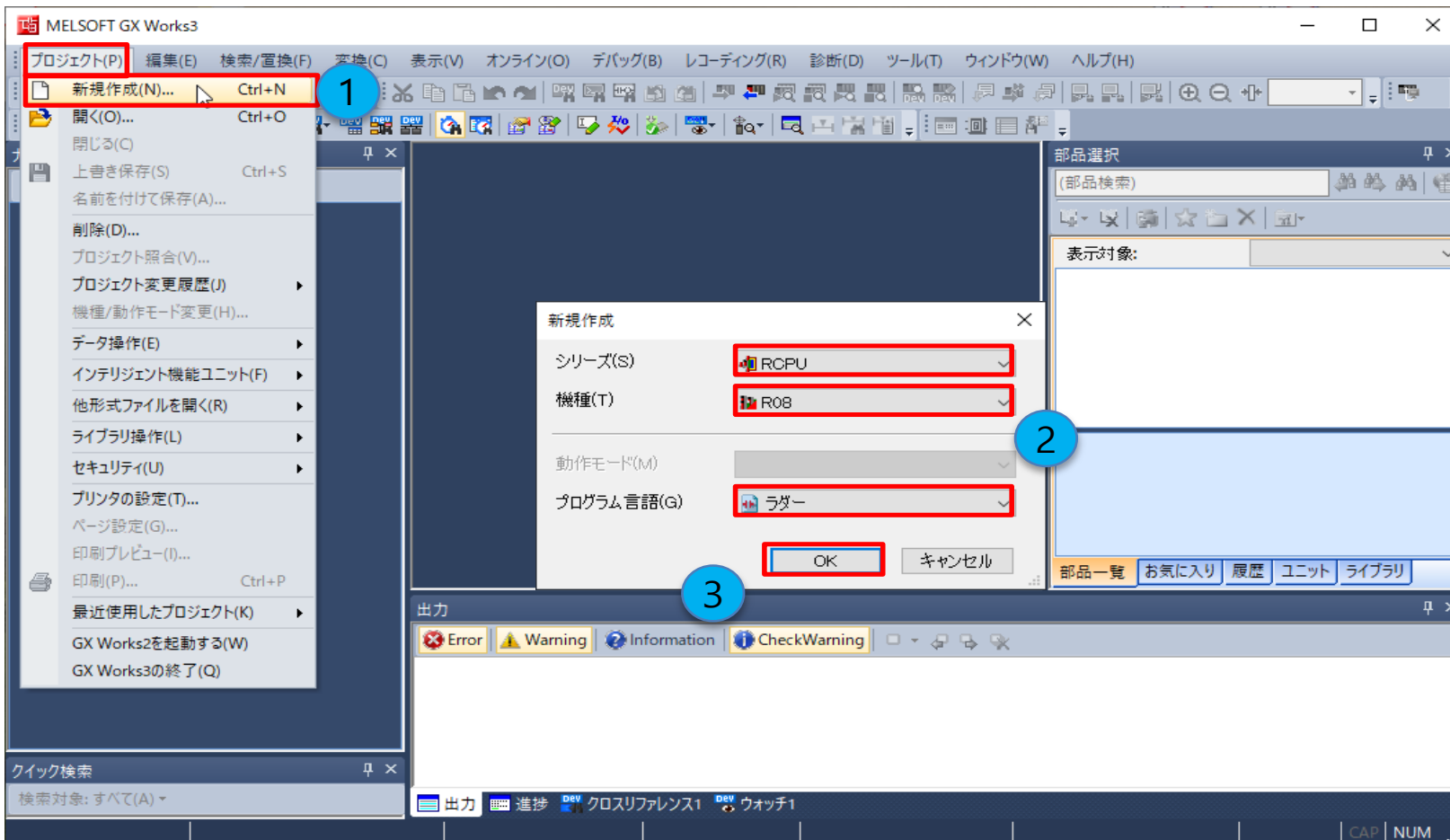
- **Ezi-IO DIO and MX Controller Parameter Settings**

No.	Item	Description
1	Ezi-IO DIO Settings 	Set the parameters using the driver configuration program (Ezi-CT Manager). Please download the configuration program and user manual from the FASTECH website. * Address: https://cltsn.fastech-motions.com/download/quick
2	RJ71GN11-T2 Configuration 	After creating an MX controller project using GX-Works3, configure the unit parameters (communication method, connection target) and axis parameters (for motion control).
3	RJ71GN11-T2 + Ezi-IO DIO Operation Verification 	Create a program to verify that the MX controller and Ezi-IO DIO are configured correctly. Manipulate the labels to verify that the motor operates normally.

2. RJ71GN11-T2 Configuration

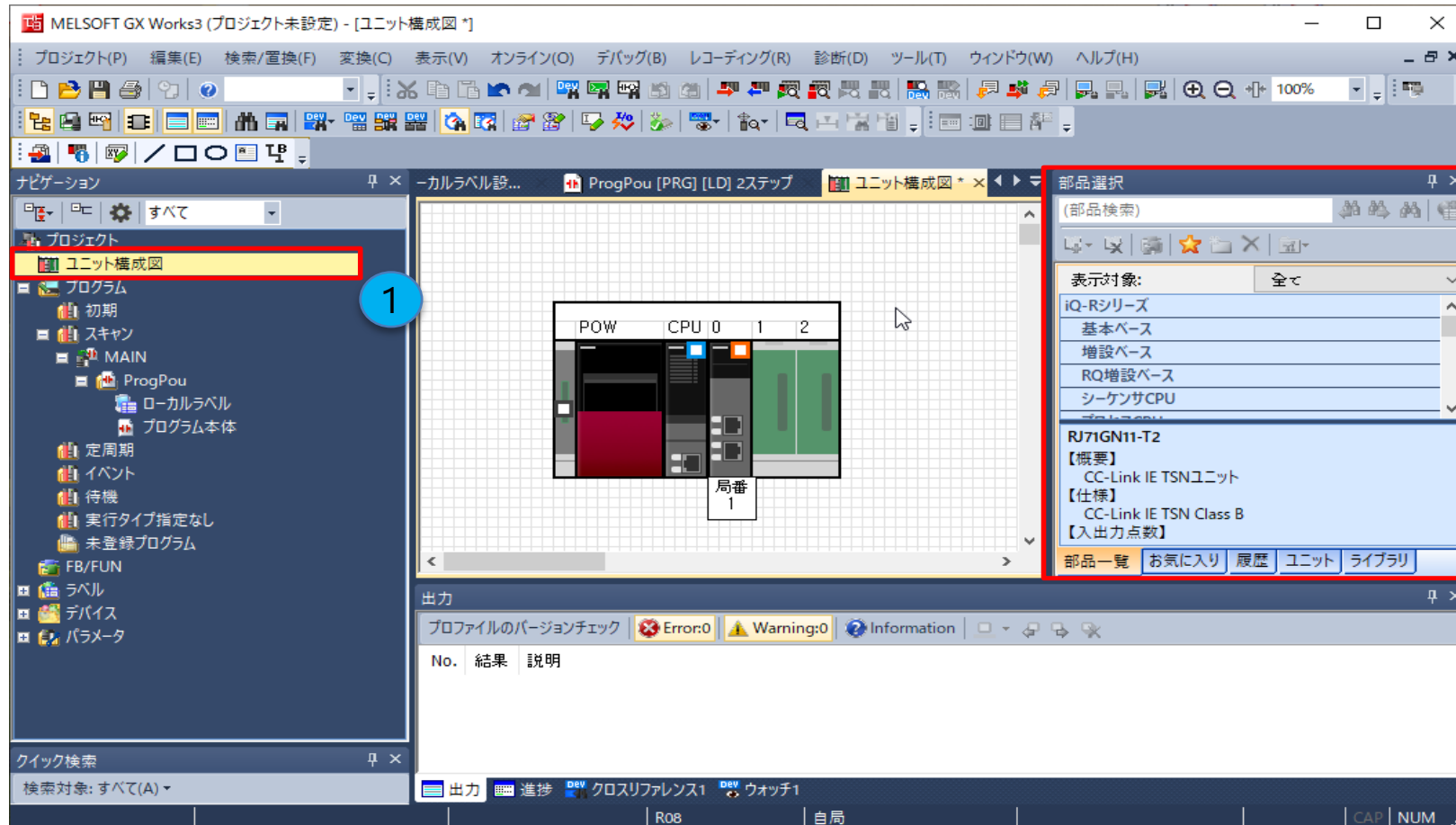
2-1. Create a New Project

- Select [Project] → [New].
- Select the CPU type and programming language, then click the "OK" button.



2-2. Configure the Unit Configuration

- Double-click [Unit Configuration Diagram] in the navigation window.
- In the Component Selection window, select the base unit, and then add the power supply unit, CPU unit, network unit, and other components based on your system requirements.



2-3. Configure the CPU Unit

- Click [Parameters] → [R08CPU] → [CPU Parameters] in the navigation window.
- In the relevant settings, to use the CC-Link IE TSN master, change [Memory/Device Settings] → [Link Direct Device Settings] to Extended Mode (iQ-R Series Mode).



2-4. Configuring the Network Unit (R71GN11-T2)

- You can view the available master units by selecting [Parameters] → [Unit Information] in the navigation window. Double-click the unit you want to configure.
- In [Required Settings], configure the station type, IP address, and subnet mask.

The screenshot displays the ProgPou software interface for configuring a network unit. The navigation pane on the left shows the hierarchy: ナビゲーション → パラメータ → ユニット情報 → 0000:RJ71GN11-T2. The main configuration area is titled '設定項目一覧' (Setting Item List) and shows a table of settings. The settings are grouped into sections: 局種別設定 (Station Type Setting), ネットワークNo.設定 (Network No. Setting), パラメータ設定方法 (Parameter Setting Method), 局番/IPアドレス設定 (Station No./IP Address Setting), and IPアドレス設定 (IP Address Setting). The '局種別設定' section shows '局種別' (Station Type) set to 'マスタ局' (Master Station). The 'IPアドレス設定' section shows 'IPアドレス' (IP Address) set to '192.168.3.253' and 'サブネットマスク' (Subnet Mask) set to '255.255.255.0'. The '適用(A)' (Apply) button is highlighted at the bottom right.

項目	設定
局種別設定	
局種別	マスタ局
ネットワークNo.設定	
ネットワークNo.	1
パラメータ設定方法	
基本設定/応用設定の設定方法	パラメータで設定
局番/IPアドレス設定	
局番/IPアドレス設定方法	パラメータで設定
局番設定	
局番	0
IPアドレス設定	
IPアドレス	192.168.3.253
サブネットマスク	255.255.255.0
デフォルトゲートウェイ	

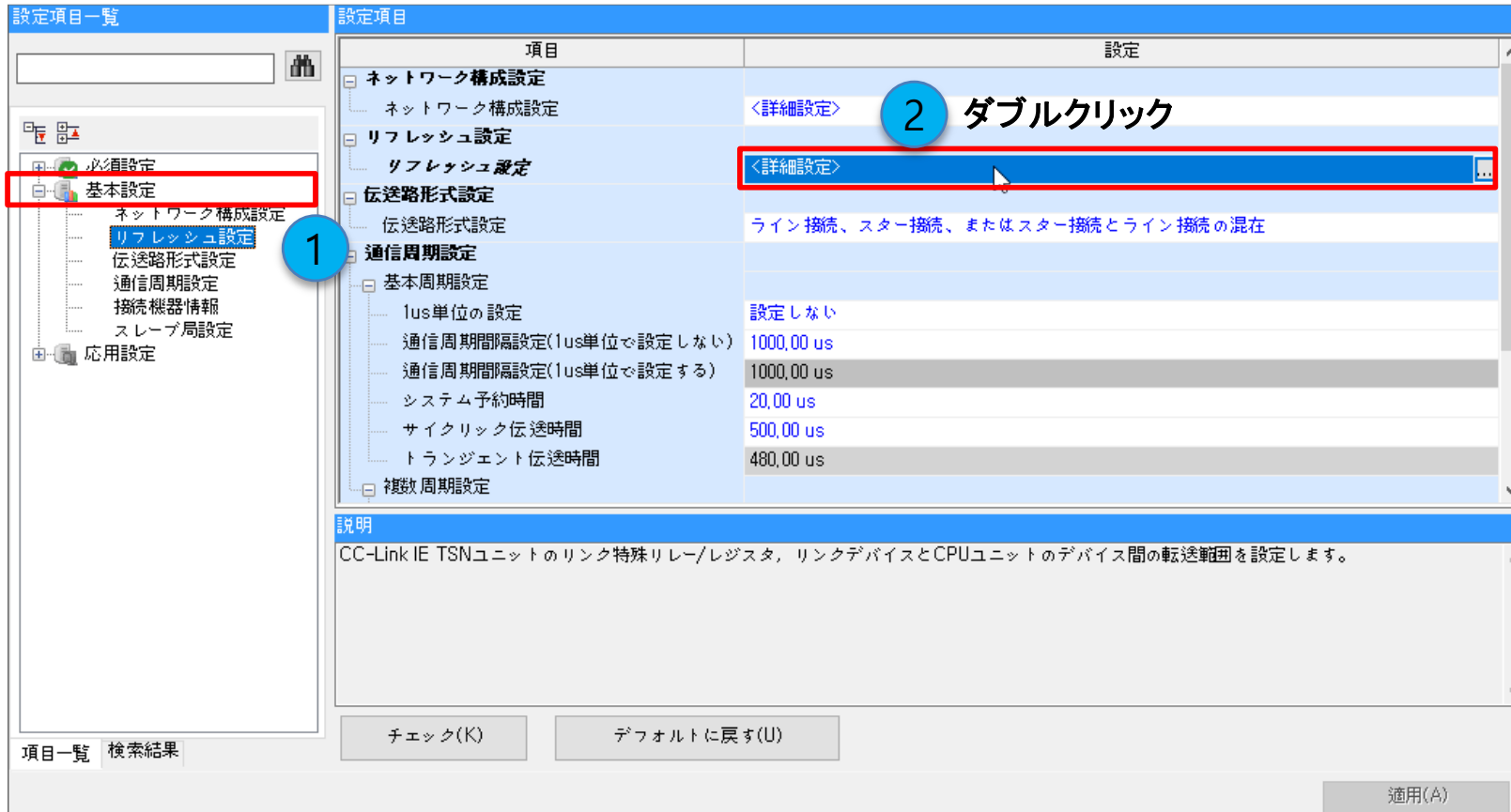
説明
自ノードが所属しているネットワークの外のネットワークの機器にアクセスする際に通過する機器（デフォルトゲートウェイ）のIPアドレスを設定します。
デフォルトゲートウェイのサブネットアドレスが自局のサブネットアドレスと同じになるように設定してください。

[設定範囲]
・空白
・0.0.0.1 ~ 223.255.255.254(00.00.00.01 ~ DF.FF.FF.FE)

チェック(K) デフォルトに戻す(U) 適用(A)

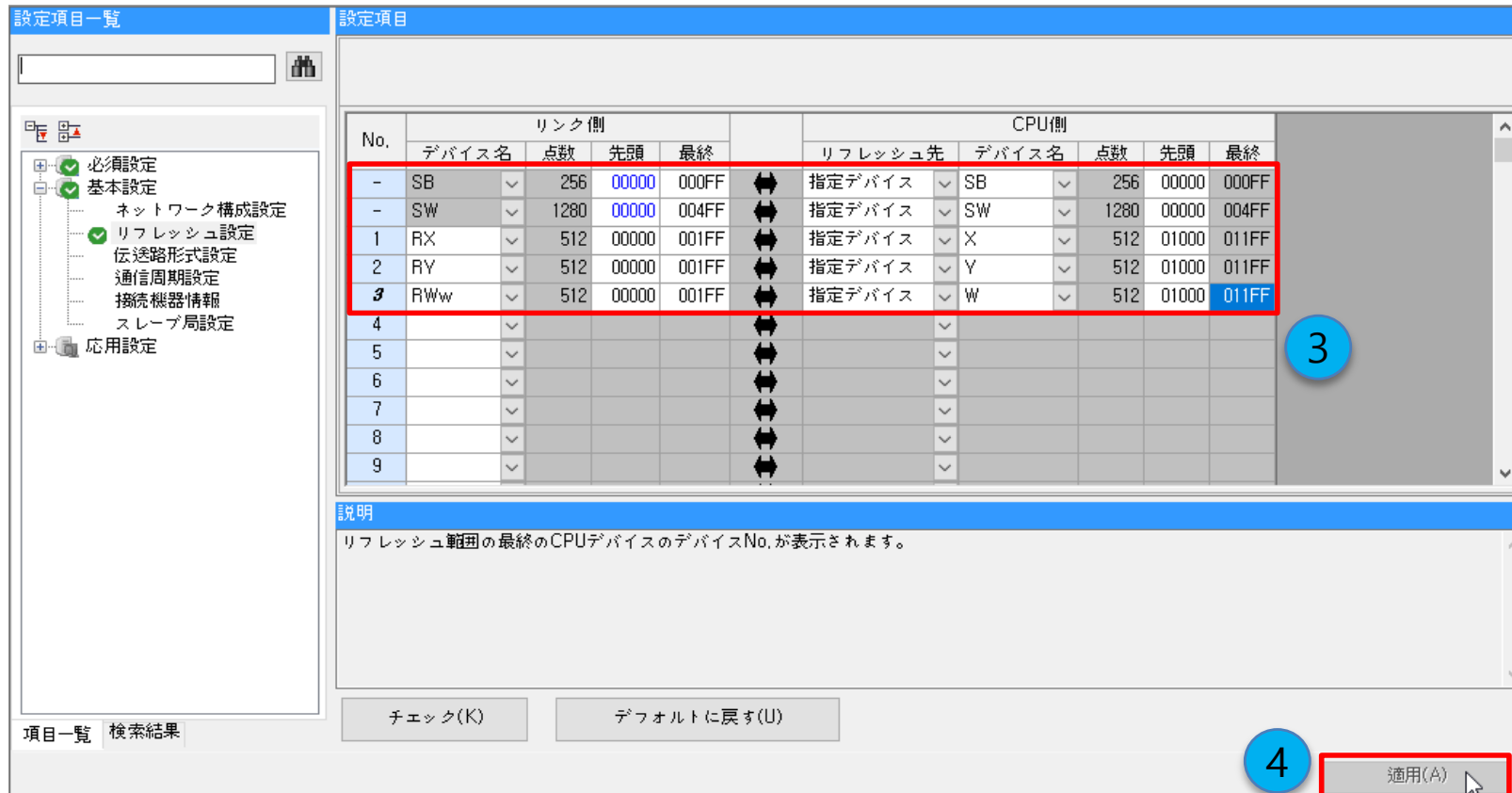
2-4. Configuring the Network Unit (R71GN11-T2)

- Double-click [Basic Settings] → [Refresh Settings] to assign a linked device. Follow the steps shown in the figure below for specific configuration.



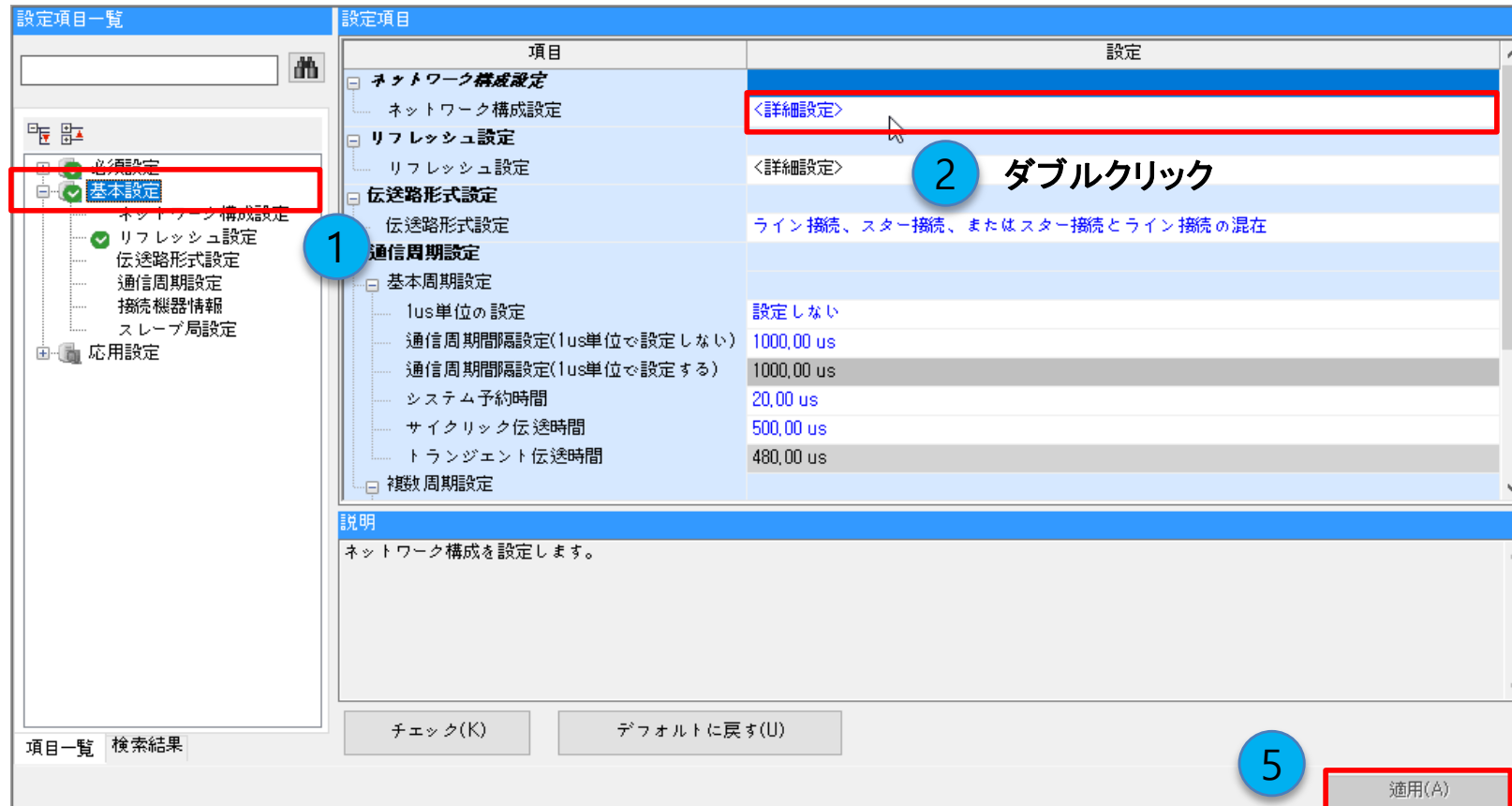
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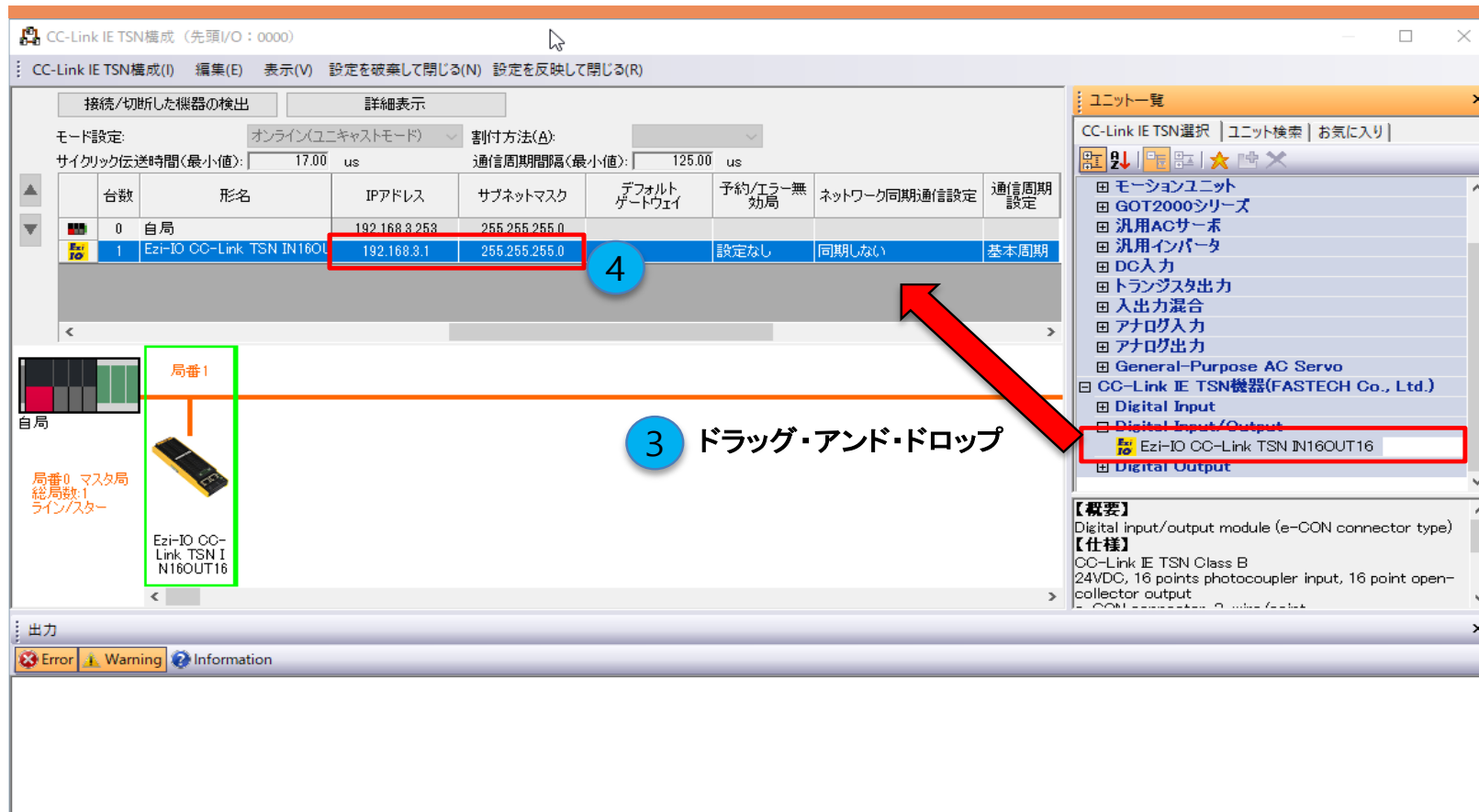
2-4. Configuring the Network Unit (R71GN11-T2)

- Double-click [Basic Settings] → [Network Configuration Settings] to proceed with the network configuration setup. Follow the steps shown in the figure below for the specific settings.



2-4. Configuring the Network Unit (R71GN11-T2)

- Double-click [Basic Settings] → [Network Configuration Settings] to proceed with the network configuration setup. Follow the steps shown in the figure below for the specific settings.





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