XX(Reducing Middleware Dependency in PLC-PC Communication)

“Requirements definition document”

20 x x year xx month xx day

C PS Production Engineering Department Digital Connect Room 〇〇(Name)

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# Introduction

## Document Purpose

　　　　This document aims to outline the requirements and understanding the communication framework for the application “Reducing Middleware Dependency in PLC-PC Communication” .

## Scope

## Terminology definitions/abbreviations

# Project Overview

## Background/purpose

When building an industrial system, it is crucial to establish efficient communication between PCs and equipment such as PLCs, as these systems often require the exchange of large volumes of real-time data across multiple devices. While middleware solutions are commonly used to manage this communication, they often require individual licenses for each PC, resulting in higher costs and limited scalability.

To overcome these challenges, we are exploring more cost-effective and flexible communication mechanisms that work across platforms and reduce dependency on licensed middleware. This approach enables easier integration, better scalability, and maintains data integrity and performance.

## Scope (scope of coverage/scope of exclusion)

## Prerequisites/restrictions

# User (stakeholder) requirements

## User classification and roles

## User needs and expectations

# Business requirements

## Current business overview

## Workflow Overview

# Functional requirements

## List of functions (overview)

# Non-functional requirements

## Performance requirements

## Security Requirements

## Availability and reliability requirements

## Operational and maintenance requirements

## Supported Environment

# System Interface Requirements

## External system integration requirements

# Restrictions

## technical constraints

## Legal and regulatory constraints

# Risks and Issues

## Predicted risks

## Response policy and issue management