

**Cermate**

**Technical Document**

The HMI Solutions and IoT Gateways Provider

July 21, 2021 | V 1.0

# Software Function Guide

## TN057S-E

# Modbus Gateway Service



[www.cermate.com](http://www.cermate.com)

## Overview

Cermate Edge Box and HMIs have the Modbus gateway service function and build in all mainstream Serial/Ethernet protocols. So you can organize, manage protocols, and select different protocol gateway when you use different equipment. What's more, Cermate offers the most popular protocols - Modbus and Modbus TCP/IP communication, for Industry Automation use. It takes just a few accessible settings by the user-friendly software (PM Designer), the field data (OT) can be efficiently delivered to PC (IT).

## Cermate Products

HMI: PA2 / PK2 / PT2 / PX / IT400 Series

Gateway: SX51 / SX52 / ES Series

PanelExpress v4.0 version

## Software

OS: Windows 7(64 bit) / Windows 10(64 bit)

PM Designer: PM Designer v4.0.3.68 or higher version

## Software Download Link

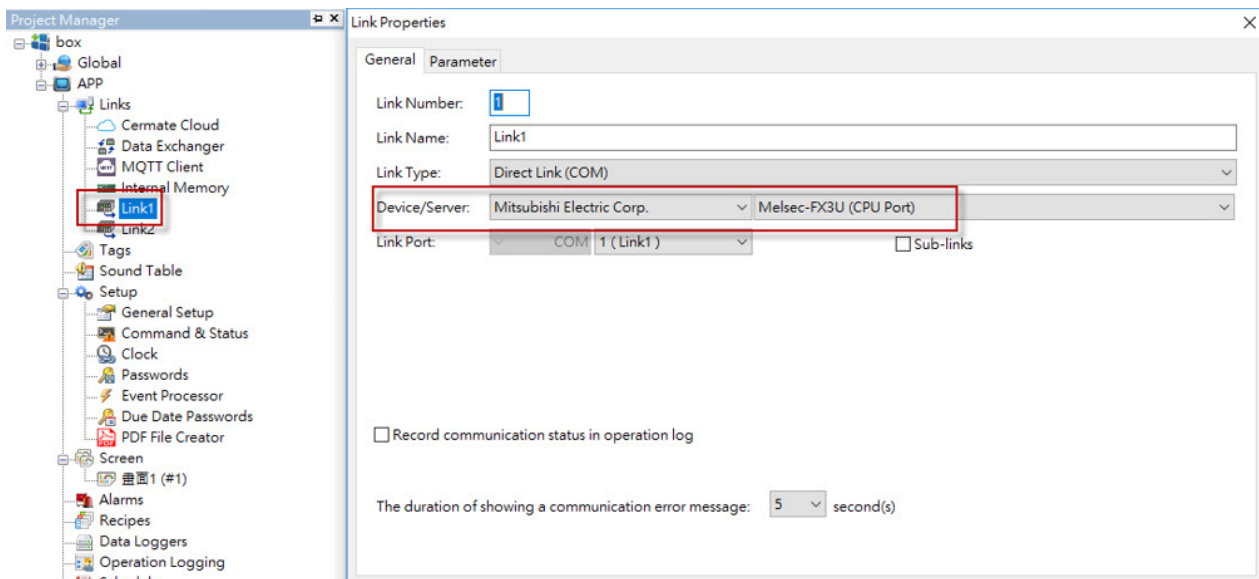
Please download the latest PM Designer from the link below.

<https://www.cermate.com/downloadsoftware.html>

## PM Designer v4.0 Setting

### 1. Build Link1

Select brand and model for the linked device (field site), below is Mitsubishi/FX3U as example (<Fig.1>).



<Fig.1>

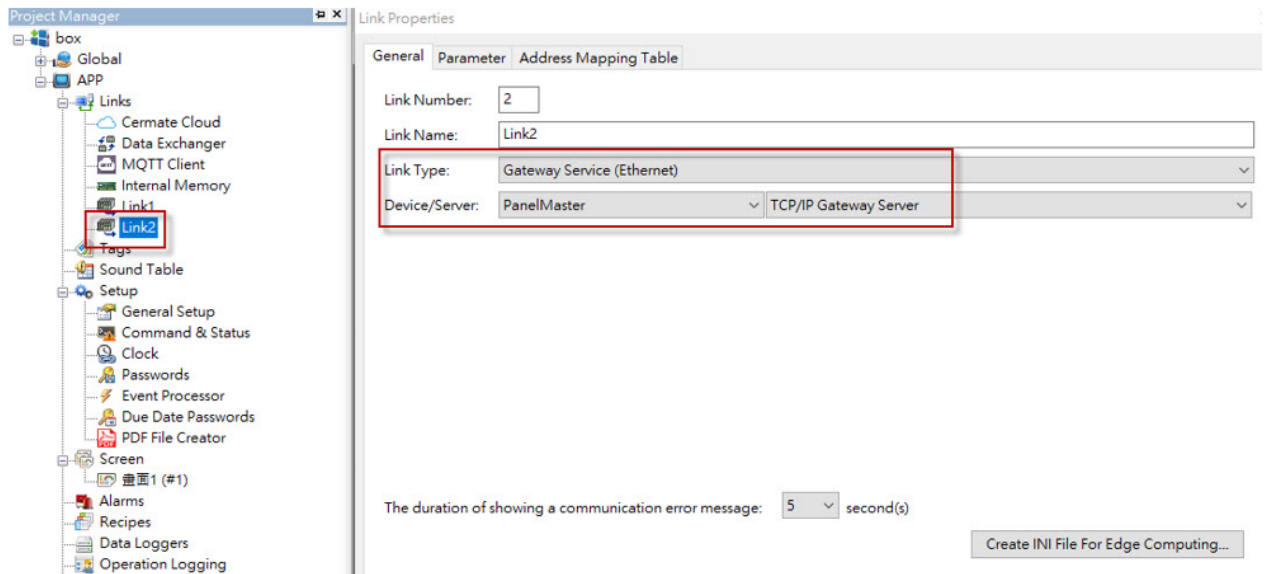
### 2. Build Link2

Configure the connection for HMI/Gateway linking to PC (IT site) via Ethernet or Serial.

#### (1) Ethernet

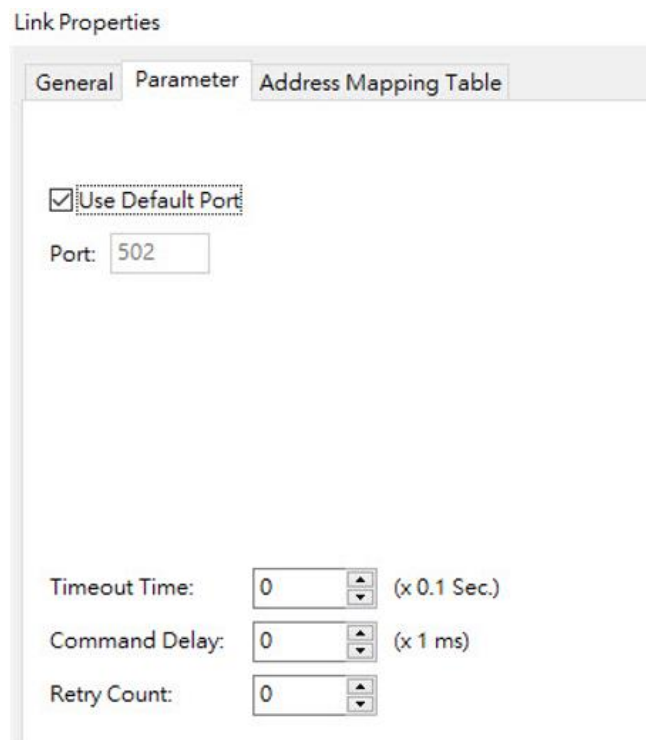
Link Type: Gateway Service (Ethernet)

Device/Server: PanelMaster/TCPIP Gateway Server (<Fig.2>)



<Fig.2>

Use 502 as default port setting (<Fig.3>).

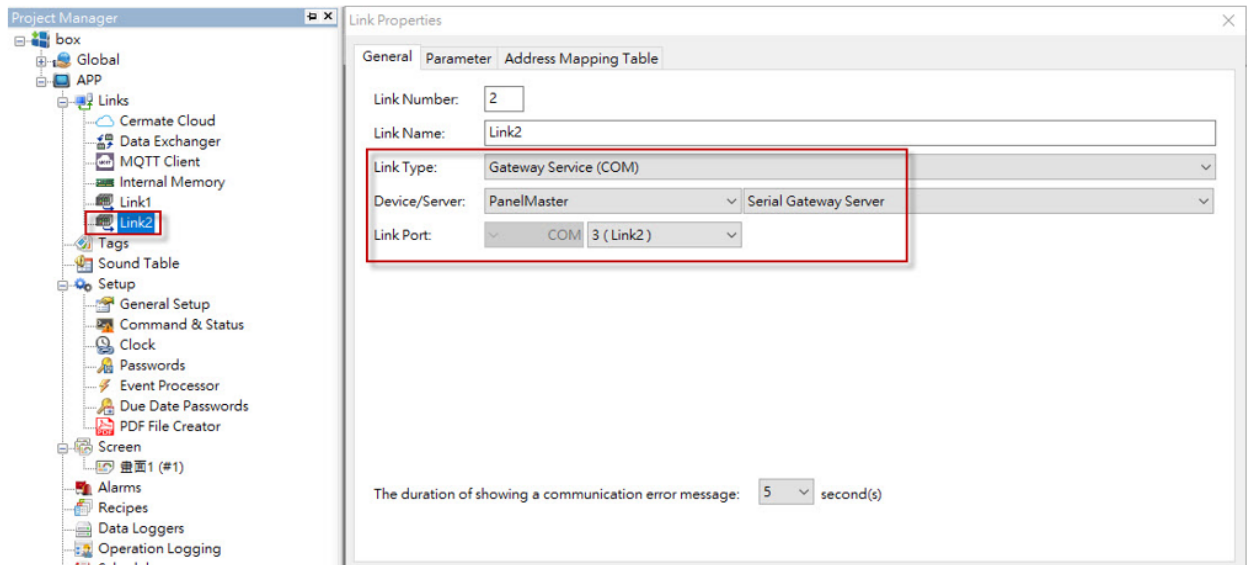


<Fig.3>

## (2) Serial

Link Type: Gateway Service (COM)

Device/Server: PanelMaster/Serial Gateway Server (<Fig.4>)



<Fig.4>

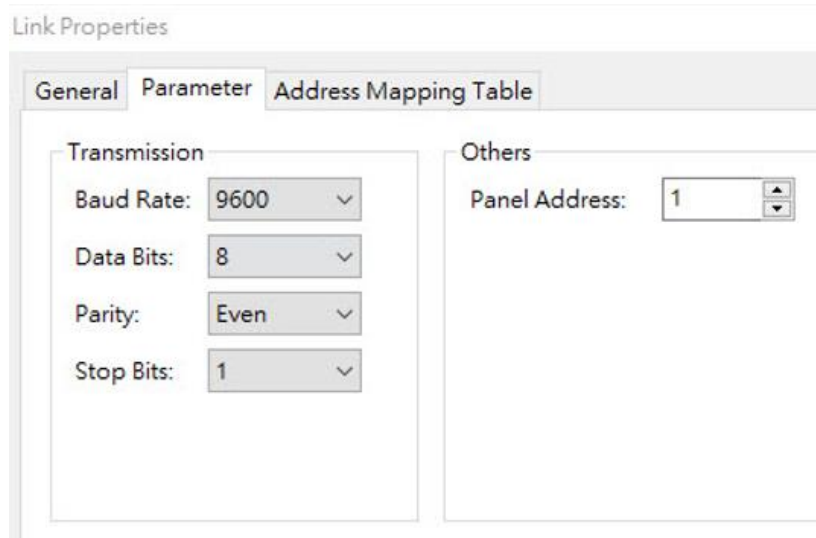
Baud Rate: 9600/19200/38400/57600/115200/187500/37500

Data Bits: 7/8

Parity: Odd/Even/None

Stop Bits: 1/2

Panel Address: 1-255



&lt;Fig.5&gt;

### (3) Address Mapping Table

Select "Use"

Type: Word/Bit

Modbus Address: Word 30001-39999/40001-49999

Bit 1-9999/10001-19999

Size: Word 1-125

Bit 1/16/32/48/64...1024

Corresponding Address: Set PLC Address

Take <Fig.6> for example:

PLC D0-D9 corresponds to Modbus 40001-40010

PLC M0-M15 corresponds to Modbus 1-16

Link Properties ×

General Parameter **Address Mapping Table**

Use No.	Type	Modbus Address	Size(*)	Corresponding Address	Cached	Refresh
<input checked="" type="checkbox"/> 1	Word	40001	10	D0	<input checked="" type="checkbox"/>	Normal
<input checked="" type="checkbox"/> 2	Bit	1	16	M0	<input checked="" type="checkbox"/>	Normal
<input type="checkbox"/> 3	Bit		1		<input type="checkbox"/>	
<input type="checkbox"/> 4	Bit		1		<input type="checkbox"/>	
<input type="checkbox"/> 5	Bit		1		<input type="checkbox"/>	
<input type="checkbox"/> 6	Bit		1		<input type="checkbox"/>	
<input type="checkbox"/> 7	Bit		1		<input type="checkbox"/>	
<input type="checkbox"/> 8	Bit		1		<input type="checkbox"/>	
<input type="checkbox"/> 9	Bit		1		<input type="checkbox"/>	
<input type="checkbox"/> 10	Bit		1		<input type="checkbox"/>	
<input type="checkbox"/> 11	Bit		1		<input type="checkbox"/>	
<input type="checkbox"/> 12	Bit		1		<input type="checkbox"/>	

\*Note: The unit is 1 word for word blocks or 1 bit for bit blocks

Refresh Rate (Blocks/Second): 5

<Fig.6>



## Technical Support Information

Website [www.cermate.com](http://www.cermate.com)

Quick contact information overseas  
Worldwide: +886-910011914  
[Linda@cermate.com](mailto:Linda@cermate.com)

---

Cermate Technologies Inc.  
Phone: +886-2-22437000  
E-mail: [service@cermate.com](mailto:service@cermate.com)

Cermate Technologies (Shanghai) Inc.  
Phone: +86-21-23570800~2  
E-mail: [service01.sh@cermate.com](mailto:service01.sh@cermate.com)

Shenzhen Cermate Technologies Inc.  
Phone: +86-755-83562179,  
E-mail: [sa-cermate@cermate.com](mailto:sa-cermate@cermate.com)