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1. Configure Device

1.1 Add Serial

General Information	
<input checked="" type="checkbox"/> Enable	
Type: Serial (Built-in)	Scan Time(ms): 1000
Description: Uart 1 support RS485 or RS232	Time Out(ms): 3000
	Retry Count: 3
	Auto Recover Time(s): 10

Serial Port Setting	
Port: COM1	Parity: None
Baud Rate: 9600	RTS: False
Data Bit: 8	DTR: False
Stop Bit: 1	

Enable the COM and follow the device to configure it.

1.2 Add Device

General Information

Enable

Name:

Device Type:

Device Model

Unit Number:

Tag Write Type:

Description:

Add device name as prefix to IO tags

Extention Properties

Use Balanced Transmission:

Use Link Confirm:

Link Address Length:

Common Address Length:

OriginatorAddr:DestCommonAddr:LinkAddr:

Information Object Address Length:

Length of (Cause of Transmission):

Device Type: IEC101

Use Balanced Transmission: 0 means Unbalanced Mode, 1 means Balanced Mode

Remark: Balanced Mode Device must be the only device over that Serial Bus.

Use Link Confirm: 0 means Disable, 1 means Enable

Link Address Length: How many bytes Link Address use.

Common Address Length: How many bytes Common Address use.

OriginatorAddr: Originator Address

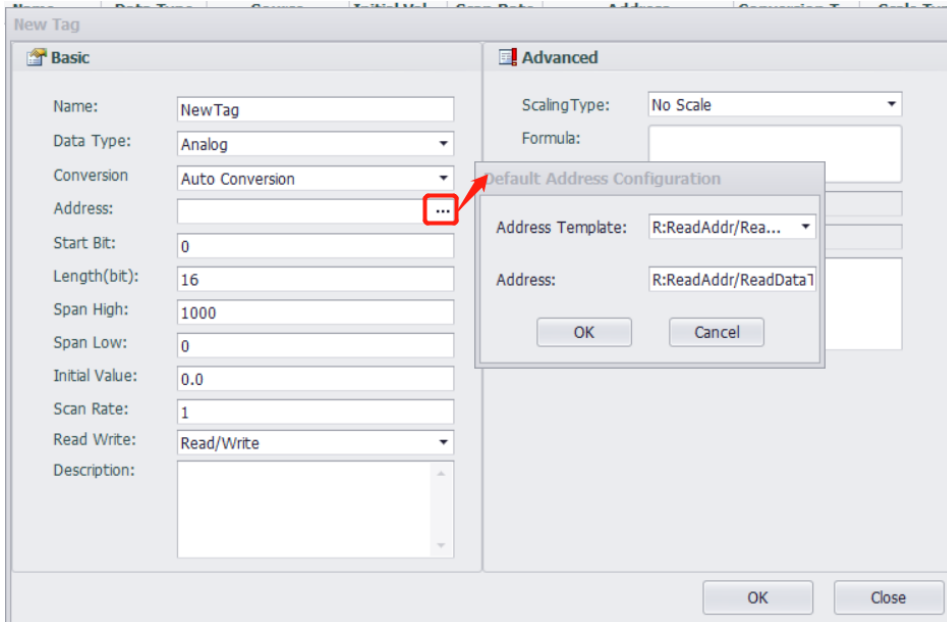
DestCommonAddr: Slave Common Addresss

LinkAddr: Link Address

Information Object Address Length: How many bytes Information Object Address use.

Length of (Cause of Transmission): How many bytes Cause of Transmission use.

2. Configure Tag



You can refer to the Address Template to write the address.

2.1 Types of Tag

There are three types of Tag.

a. ReadOnly Tag

R:ReadAddr/ReadDataType/ReadCmd

Example: R:400/M_BO_NA_1/n

b. WriteOnly Tag

W:WriteAddr/WriteCmd

Example: W:2300/C_RC_NA_1

Note: Always show value 0 for this kind of tag

c. ReadAndWrite Tag

R:ReadAddr/ReadDataType/ReadCmd/W:WriteAddr/WriteCmd

Example: R:400/M_BO_NA_1/n/W:2400/n

Note: Add /SE after WriteCmd to change “Direct Execute” to “Select and Execute”

Example: R:100/M_SP_NA_1/n/W:2100/n/SE

W:2100/C_SC_NA_1/SE

2.2 Elements of Tag

ReadAddr: Information Object Address

WriteAddr: Information Object Address

ReadDataType: Choose ReadDataType below

Meaning of Read Data Type

Read Data Type	Meaning
M_SP_NA_1/M_SP_TA_1/ M_SP_TB_1	Single-Point Information (No Time Tag/Time Tag 24/Time Tag 56)
M_DP_NA_1/M_DP_TA_1/ M_DP_TB_1	Double-Point Information (No Time Tag/Time Tag 24/Time Tag 56)
M_BO_NA_1/M_BO_TA_1/M_BO_TB_1	Bit String (No Time Tag/Time Tag 24/Time Tag 56)
M_ME_NA_1/M_ME_TA_1/M_ME_TD_1	Measured Normalized Value (No Time Tag/Time Tag 24/Time Tag 56)
M_ME_NB_1/M_ME_TB_1/M_ME_TE_1	Measured Scaled Value (No Time Tag/Time Tag 24/Time Tag 56)
M_ME_NC_1/M_ME_TC_1/M_ME_TF_1	Measured Short Floating Point Number (No Time Tag/Time Tag 24/Time Tag 56)
M_ST_NA_1/M_ST_TA_1/M_ST_TB_1	Step Position Information (No Time Tag/Time Tag 24/Time Tag 56)
M_ME_ND_1	Measured Normalized Values without Quality Descriptor
M_PS_NA_1	Packed Single-Point Information
M_IT_NA_1/M_IT_TA_1/M_IT_TB_1	Integrated Totals (No Time Tag/Time Tag 24/Time Tag 56)
M_EP_TA_1/M_EP_TD_1	Event of protection equipment (Time Tag 24/Time Tag 56)
M_EP_TB_1/M_EP_TE_1	Packed start events of protection equipment (Time Tag 24/Time Tag 56)
M_EP_TC_1/M_EP_TF_1	Packed output circuit information (Time Tag 24/Time Tag 56)

Note:

TimeTag24 include Minute+Millisecond.

TimeTag56 include Year+Month+Day+Hour+Minute+Millisecond.

ReadDataType	Extra Relative Response		
M_SP_NA_1	M_SP_TA_1	M_SP_TB_1	
M_SP_TA_1	M_SP_TB_1		
M_DP_NA_1	M_DP_TA_1	M_DP_TB_1	
M_DP_TA_1	M_DP_TB_1		
M_ST_NA_1	M_ST_TA_1	M_ST_TB_1	
M_ST_TA_1	M_ST_TB_1		
M_BO_NA_1	M_BO_TA_1	M_BO_TB_1	
M_BO_TA_1	M_BO_TB_1		
M_ME_ND_1	M_ME_NA_1	M_ME_TA_1	M_ME_TD_1
M_ME_NA_1	M_ME_TA_1	M_ME_TD_1	
M_ME_TA_1	M_ME_TD_1		
M_ME_NB_1	M_ME_TB_1	M_ME_TE_1	
M_ME_TB_1	M_ME_TE_1		
M_ME_NC_1	M_ME_TC_1	M_ME_TF_1	
M_ME_TC_1	M_ME_TF_1		
M_IT_NA_1	M_IT_TA_1	M_IT_TB_1	
M_IT_TA_1	M_IT_TB_1		
M_EP_TA_1	M_EP_TD_1		
M_EP_TB_1	M_EP_TE_1		
M_EP_TC_1	M_EP_TF_1		

ReadCmd: Choose ReadCmd below

ReadCmd	Description
i:GroupID	Use Interrogation Command GroupID range from 0-16 0 means General Group 1 means Group1 ex: i:0
r	Use C_RD_NA_1 to Read ReadAddr
c:GroupID	Use Counter Interrogation GroupID range from 1-5 5 means General Group 1 means Group1 ex: c:5
n	No Read Command, slave sends data automatically

WriteCmd: Choose WriteCmd below

WriteCmd	Description
n	For "ReadAndWrite Tag" Choose Mapping Write Command by Read Data Type. See Read Data Type and Mapping Write Command Table
C_SC_NA_1	For WriteOnly Tag/Single Point Information Value 0: Off Value 1: On
C_DC_NA_1	For WriteOnly Tag/Double Point Information Value 1: Off Value 2: On In M_DP_NA_1: Value 0: indeterminate or intermediate state In M_DP_NA_1: Value 3: indeterminate state
C_RC_NA_1	For WriteOnly Tag/Step Position Information Value 1: next step LOWER Value 2: next step HIGHER
C_SE_NA_1	For WriteOnly Tag/Measured Normalized Value
C_SE_NB_1	For WriteOnly Tag/Measured Scaled Value
C_SE_NC_1	For WriteOnly Tag/Measured Short Floating Point Number
C_BO_NA_1	For WriteOnly Tag/Bit String
C_CI_NA_1:GroupID	For WriteOnly Tag/Integrated Totals GroupID range from 1-5 GroupID 5 means General Group GroupID 1 means Group1 Value 0: read (neither freeze nor reset) Value 1: counter freeze without reset (value frozen represents integrated total) Value 2: counter freeze with reset (value frozen represents incremental information) Value 3: counter reset

Read Data Type	Mapping Write Command Table
M_SP_NA_1/M_SP_TA_1/M_SP_TB_1	C_SC_NA_1
M_DP_NA_1/M_DP_TA_1/M_DP_TB_1	C_DC_NA_1
M_BO_NA_1/M_BO_TA_1/M_BO_TB_1	C_BO_NA_1
M_ME_NA_1/M_ME_TA_1/M_ME_TD_1	C_SE_NA_1
M_ME_NB_1/M_ME_TB_1/M_ME_TE_1	C_SE_NB_1
M_ME_NC_1/M_ME_TC_1/M_ME_TF_1	C_SE_NC_1
M_ME_ND_1	C_SE_NA_1
M_ST_NA_1/M_ST_TA_1/M_ST_TB_1	Use WriteOnly tag instead
M_IT_NA_1/M_IT_TA_1/M_IT_TB_1	Use WriteOnly tag instead

Read Data Type and Mapping Write Command Table

Bit Information

You can change StartBit and Length to get bit information for ReadDataType below.

Available Read Data Type
M_PS_NA_1
M_EP_TB_1/M_EP_TE_1
M_EP_TC_1/M_EP_TF_1

The screenshot shows the 'New Tag' configuration window with the following settings:

- Name: New Tag
- Data Type: Analog
- Conversion: Auto Conversion
- Address: ...
- Start Bit: 0
- Length(bit): 16
- Span High: 1000
- Span Low: 0
- Initial Value: 0.0
- Scan Rate: 1
- Read Write: Read/Write
- Description: (empty)

	M_EP_TB_1/M_EP_TE_1	M_EP_TC_1/M_EP_TF_1
bit 0	GS = general start of operation	GC = general command to output circuit
bit 1	SL1 = start of operation phase L1	CL1 = command to output circuit phase L1
bit 2	SL2 = start of operation phase L2	CL2 = command to output circuit phase L2
bit 3	SL3 = start of operation phase L3	CL3 = command to output circuit phase L3
bit 4	SIE = start of operation IE (earth current)	
bit 5	SRD = start of operation in reverse direction	