

WEINTEK LABS., INC.

iR-COP & Digital Module Settings

Demo Project

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1. Overview

This demo project introduces how to quickly start using an iR Series digital module. In this demo project, iR-DM16-P is used as the first module connected to an iR-COP coupler. The parameter settings of iR-COP are as follows:

Node ID: 1

Baud Rate: 250K

2. Operation

Step 1. In CODESYS software add an iR-COP communication device, and make sure that the Node ID and Baud Rate settings in the software are identical to the settings on iR-COP coupler.

Step 2. Declare variables in the program and configure the number of input/output points.

```
1 PROGRAM PLC_PRG
2 VAR
3     xDM16_In_0, xDM16_In_1, xDM16_In_2, xDM16_In_3, xDM16_In_4, xDM16_In_5, xDM16_In_6, xDM16_In_7 : BOOL ;
4     xDM16_Out_0, xDM16_Out_1, xDM16_Out_2, xDM16_Out_3, xDM16_Out_4, xDM16_Out_5, xDM16_Out_6, xDM16_Out_7 : BOOL ;
5     axIn : ARRAY[0..7] OF BOOL ;
6     axOut : ARRAY[0..7] OF BOOL ;
7 END_VAR

1 xDM16_In_0 := axIn[0] ;
2 xDM16_In_1 := axIn[1] ;
3 xDM16_In_2 := axIn[2] ;
4 xDM16_In_3 := axIn[3] ;
5 xDM16_In_4 := axIn[4] ;
6 xDM16_In_5 := axIn[5] ;
7 xDM16_In_6 := axIn[6] ;
8 xDM16_In_7 := axIn[7] ;
9 axOut[0] := xDM16_Out_0;
10 axOut[1] := xDM16_Out_1;
11 axOut[2] := xDM16_Out_2;
12 axOut[3] := xDM16_Out_3;
13 axOut[4] := xDM16_Out_4;
14 axOut[5] := xDM16_Out_5;
15 axOut[6] := xDM16_Out_6;
16 axOut[7] := xDM16_Out_7;
```

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Variable	Mapping	Channel	Address	Type
		DO byte 1	%QB0	USINT
Application.PLC_PRG.axOut[0]		Bit0	%QX0-0	BOOL
Application.PLC_PRG.axOut[1]		Bit1	%QX0-1	BOOL
Application.PLC_PRG.axOut[2]		Bit2	%QX0-2	BOOL
Application.PLC_PRG.axOut[3]		Bit3	%QX0-3	BOOL
Application.PLC_PRG.axOut[4]		Bit4	%QX0-4	BOOL
Application.PLC_PRG.axOut[5]		Bit5	%QX0-5	BOOL
Application.PLC_PRG.axOut[6]		Bit6	%QX0-6	BOOL
Application.PLC_PRG.axOut[7]		Bit7	%QX0-7	BOOL
		DO byte 2	%QB1	USINT
		DO byte 3	%QB2	USINT
		DO byte 4	%QB3	USINT
		DO byte 5	%QB4	USINT
		DO byte 6	%QB5	USINT
		DO byte 7	%QB6	USINT
		DO byte 8	%QB7	USINT
		AO word 1	%QW4	INT
		AO word 2	%QW5	INT
		AO word 3	%QW6	INT
		AO word 4	%QW7	INT
		AO word 5	%QW8	INT
		AO word 6	%QW9	INT
		AO word 7	%QW10	INT

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Variable	Mapping	Channel	Address	Type
		AO word 9	%QW12	INT
		AO word 10	%QW13	INT
		AO word 11	%QW14	INT
		AO word 12	%QW15	INT
		DI byte 1	%IB0	USINT
Application.PLC_PRG.axIn[0]		Bit0	%IX0-0	BOOL
Application.PLC_PRG.axIn[1]		Bit1	%IX0-1	BOOL
Application.PLC_PRG.axIn[2]		Bit2	%IX0-2	BOOL
Application.PLC_PRG.axIn[3]		Bit3	%IX0-3	BOOL
Application.PLC_PRG.axIn[4]		Bit4	%IX0-4	BOOL
Application.PLC_PRG.axIn[5]		Bit5	%IX0-5	BOOL
Application.PLC_PRG.axIn[6]		Bit6	%IX0-6	BOOL
Application.PLC_PRG.axIn[7]		Bit7	%IX0-7	BOOL
		DI byte 2	%IB1	USINT
		DI byte 3	%IB2	USINT
		DI byte 4	%IB3	USINT
		DI byte 5	%IB4	USINT
		DI byte 6	%IB5	USINT
		DI byte 7	%IB6	USINT
		DI byte 8	%IB7	USINT
		AI word 1	%IW4	INT
		AI word 2	%IW5	INT
		AI word 3	%IW6	INT

Step 3. Click [Login] button to make CODESYS start reading from / writing to iR-DM16-P's Input/Output points.