

# **ADAMIO Device Driver Guide**

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### 1.1.1 ADMIO Device-Type

The ADAM-4000 Distributed I/O Systems from Advantech are supported by the ADMIO **Device Type** drivers in WebAccess. There are other manufacturers, which use "ADAM 4000" protocol compatible devices, that are also supported by this driver.

The ADMIO Device driver reads the IO Modules of the ADAM-4000 directly. The ADAM 4000 devices vary between 1 and 8 channels each.

#### IO Tags

A **Tag** reads only one **channel** of an IO Module. The Request, Argument Code and Channel constitute the **address: Request, Code, channel**.

For example, a Tag that reads Slot number 1 of a Model 4017 Analog Input Module, the address of the tag is: #00,0,1

The Request and Code are specific to the IO Type (AI, AO, DI, DO, Counter) of 4000 series. To make things easy, the WebAccess Driver comes with Parameters configured for the all known Models of 4000 and their respective IO Types and channels.

When configuring a Tag for the ADAM 4000, it is recommended to use one of the pre-built Parameters. For most applications, NO MODIFICATION of the Parameter Address is required!

The Digital Inputs all use the same Address, the channels vary by which Bit is read from the word. Similarly for Digital Outputs.

#### Parameters

WebAccess supplies asset of parameters to use as a template for Tag configuration. NO MODIFICATION of the Parameter Address is required!

A list of the parameters for Channel 0 and Channel 1 are listed below as a summary. Multiple Channel Modules will have a parameter for each Channel.

The same parameter will work with multiple Model types. The Channel type determines which parameter (an address) or should use in building your tag.

Parameter	Model(s)	Channel	Address	Start Bit	Length
AI	4011, 4011D, 4012, 4013, 4016, 4017, 4018, 4018M, 4019	0	#00,0,0	0	16

AI_1	4011, 4011D, 4012, 4013, 4016, 4017, 4018, 4018M, 4019	0	#00,0,1	0	16
AO	4021	0	\$006,2,0	0	16
Counter	4080, 4080D	0	#AAN,0,0	0	16
DI_00	4050, 4052, 4053,	0	\$006,0,0,4	0	1
DI_01	4050, 4052, 4053,	0	\$006,0,0,4	1	1
DO_00	4050, 4060	0	\$006,0,0,4	8	1
DO_01	4050, 4060	0	\$006,0,0,4	9	1

## Blocks

There are no pre-built Blocks for the ADMIO Device Type. A User could easily build a simple block. It would be useful if he repeatedly used lots of IO Modules like it. However, it might be just as easy to build IO tags instead, and more useful, since the tags could have individual tagnames but the same block name is used to reference all parameters of a block.

A **Block** reads multiple channels of an IO Module. The individual **parameters** within the block read one channel each. Each **parameter** has a unique address: **Model, slot, channel**.

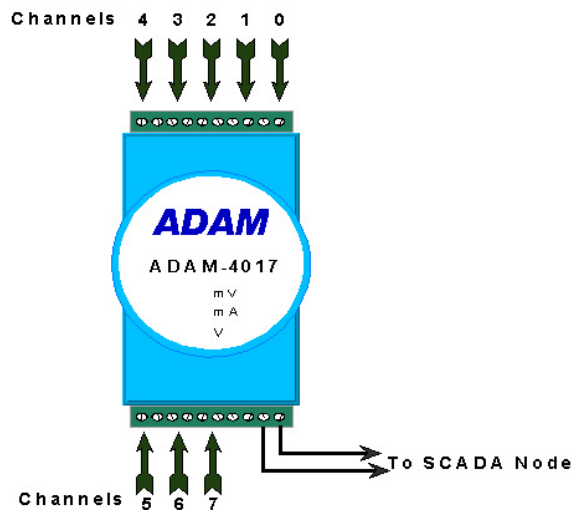
For example, a **simple Block** that reads all 8 Channels of a 4052 could be built using the following parameters and addresses:

parameter	address	bit
DI_00	\$006,0,0,4	0
DI_01	\$006,0,0,4	1
DI_02	\$006,0,0,4	2
DI_03	\$006,0,0,4	3
DI_04	\$006,0,0,4	4
DI_05	\$006,0,0,4	5
DI_06	\$006,0,0,4	6
DI_07	\$006,0,0,4	7

## Block Offset

If building a Block for the ADMIO, the **Block Offset should always be 0,0,0**. This is because, the parameter addresses are always the same within a ADAM 4000 modules. It is the unit number, in the Device Configuration, that distinguishes one ADAM 4000 module from another.

### 1.1.1.1 Configure ADMIO Tag example



This example is to a tag to an Analog Input from Channel 3 (the 4<sup>th</sup> input channel) of an ADAM 4017 Analog Input Module represented in the above drawing.

1. Open **Internet Explorer**.
2. Connect to **Project Node**.
3. Start **WebAccess Configuration**.
4. Select **Project**.
5. Select **SCADA Node**.
6. Select an ADAM4K **Device**.
7. Select **Add Tag**.
8. From **Parameter** Pull Down List Select **AI\_03**. This will configure an Analog Input from Channel 3 (the fourth input). Wait for the Page to update.
9. Optionally, select **ALARM** from the ALARM pulldown list. Wait for the Page to update with a PINK highlight around alarm (an additional Alarm Fields at bottom of page).
10. Enter a **Tagname** users can use to identify this Analog Input measurement. For example, if this is a Pressure measurement, enter **Pressure1**.
11. DO NOT Edit the **Address**. You should see: **#00,0,3**

12. Enter a Description. This will help identify this tags to Users and Operators. For example, enter Boiler #1 Steam Pressure.
13. Optionally enter, Scaling, Span Hi, Span Low, Engineering Units, and Alarms; enable data logging, etc.
14. Press **Submit**.

Create New Tag		[Cancel]	Submit
Parameter	AI_03	Point (analog)	
Alarm	Alarm		
Tag Name	Pressure1		
Description	AI_03		
Scan Type	Constant Scan		
Address	#00,0,3		
Conversion Code	Text Value		
Start Bit	0		
Length	16		
Signal Reverse	<input type="radio"/> Yes <input checked="" type="radio"/> No		
Scaling Type	No Scale		
Scaling Factor 1	0		
Scaling Factor 2	0		

15. Press **Submit**

Congratulations! You have just configured a Analog Input Measurement from an ADAM 4000.