I-8026W
Linux API reference Manual

Multifunction I/O Module

Version 1.1.0, Jan 2015

Written by Hans Chen

Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved. E-mail: service@icpdas.com

Warranty

All products manufactured by ICP DAS are under warranty regarding defective materials for a period of one year, beginning from the date of delivery to the original purchaser.

Warning

ICP DAS assumes no liability for any damage resulting from the use of this product. ICP DAS reserves the right to change this manual at any time without notice. The information furnished by ICP DAS is believed to be accurate and reliable. However, no responsibility is assumed by ICP DAS for its use, nor for any infringements of patents or other rights of third parties resulting from its use.

Copyright

Copyright © 2013 by ICP DAS Co., Ltd. All rights are reserved.

Trademarks

Names are used for identification only and may be registered trademarks of their respective companies.

Contact Us

If you have any problems, please feel free to contact us.

You can count on us for quick response.

Email: service@icpdas.com

Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved. E-mail: service@icpdas.com

Table of Contents

Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved. E-mail: service@icpdas.com

Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved.

Preface

The I-8026W is a multifunction I/O module that provides 6 Analog Input channels, 2 Analog Output channels, 2 Digital Input channels, 2 Digital Output channels.

The information contained in this manual is divided into the following topics:

- Chapter 1, “Introduction” – This chapter provides information related to the hardware, such as the specifications, the jumper settings details and wiring guidelines.
- Chapter 2, “Quick Start” – This chapter provides information on how to get started, including an overview of the location of the demo programs, a “Getting Started Guide”, and an outline of the calibration process.
- Chapter 3, “API Functions” – This chapter describes the functions provided in the I-8026W library, together with an explanation of the differences in the naming rules used for the MiniOS7 and the Windows platforms.
- Chapter 4, “Troubleshooting” – This chapter provides some troubleshooting techniques should you encounter any problems while operating the I-8026W module.

Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved. E-mail: service@icpdas.com

1. Introduction

The I-8026W is a multifunction module that provides 6 Analog Input channels, 2 Analog Output channels, 2 Digital Input channels, and 2 Digital Output channels.

It also allows a programmable input range on all Analog Input channels (±10 V, ±5 V, ±2.5 V, ±1.25 V, and ±20 mA), while Analog Output channels are 12 bit at either ±10 V, ±5 V, 0 to 10 V, 0 to 5 V, or 0 to 20 mA. Each Analog Input channel can be configured for an individual range, and a high overvoltage protection of 240 Vrms is also provided. Voltage and current inputs/outputs are jumper selectable.

Applications

- Industrial Automation
- Industrial Machinery
- Building Automation
- Food and Beverage Systems
- Semiconductor Fabrication
- Control Systems

Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved. E-mail: service@icpdas.com

1.1. Specifications

Analog Input	
Input Channels	6
Input Type	±10 V, ±5 V, ±2.5 V, ±1.25 V, ±20 mA (Jumper Selectable)
Resolution	12-bit
Accuracy	0.2% of FSR for +/- 1 LSB
Overvoltage Protection	240 Vrms
Input Impedance	>2 MΩ
Sampling Rate	Max to 9k Samples/sec (detailed refer to below table Performance for Read AI Functions)
Individual Channel Configuration	Yes
Analog Output	
Output Channels	2
Output Type	±10 V, ±5 V, 0 to 10 V, 0 to 5 V, 0 to 20 mA (Jumper Selectable)
Resolution	12-bit
Accuracy	± 0.2% of FSR
Voltage Output Capability	10 V @ 20 mA
Individual Channel Configuration	Yes
Setting Time	Max to 320 us
Digital Input	
Output Channels	2
Type:	Wet Contact (Sink/Source)
On Voltage Level	+10 V to +30 V
Off Voltage Level	+5 V Max.
Response speed	5K Hz/s

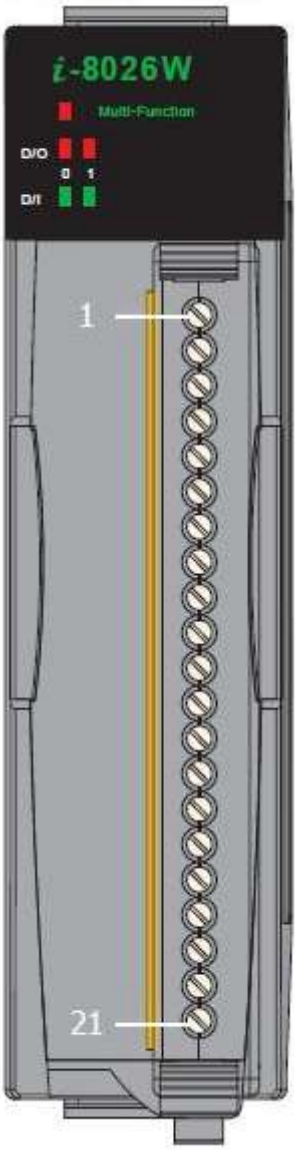
Digital Output

Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved. E-mail: service@icpdas.com

Input Channels	2 (Sink/Source)
Type	Isolated Open Collector (Sink)
Max. Load Current	100 mA/channel
Load Voltage	+5 VDC to +30 VDC
Response speed	5K Hz/s
LED Indicators/Display	
System LED Indicator	1 LED as Power/Communication Indicator
I/O LED Indicator	4 LEDs as Digital Input & Digital Output
Isolation	
Intra-module Isolation, Field-to-Logic	2500 VDC
EMS Protection	
ESD (IEC 61000-4-2)	±4 kV Contact for Each Terminal
	±8 kV Air for Random Point
Power	
Power Consumption	1.8 W Max.
Environment	
Operating Temperature	-25 to +75°C
Storage Temperature	-30 to +80°C
Humidity	5 to 95% RH, Non-condensing
Mechanical	
Dimensions (W x L x H)	30 mm x 102 mm x 115 mm

Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved. E-mail: service@icpdas.com

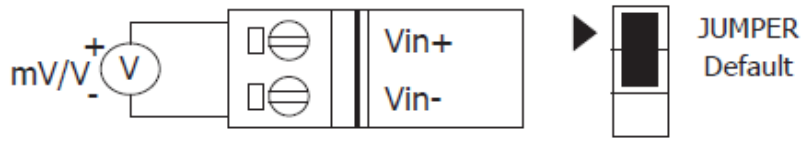
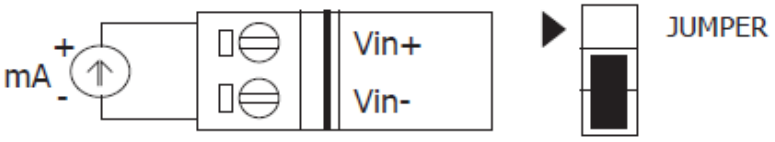
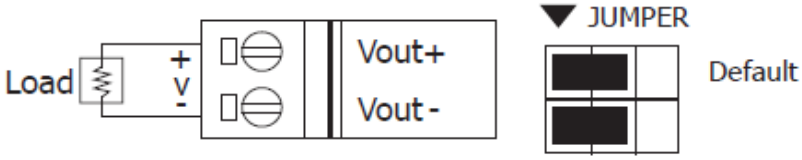
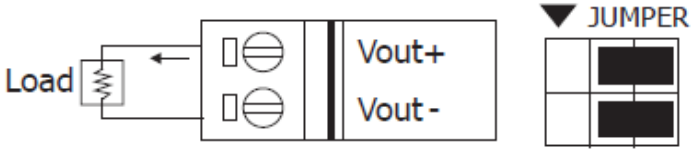
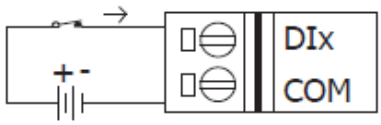
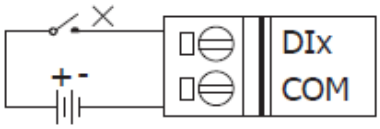
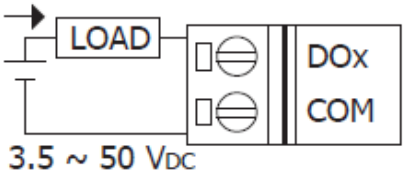
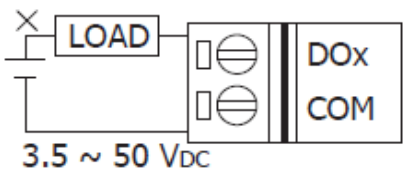
1.2. Pin Assignments



Terminal No.	Pin Assignment
01	Vin0+
02	Vin0 -
03	Vin1+
04	Vin1 -
05	Vin2+
06	Vin2 -
07	Vin3+
08	Vin3 -
09	Vin4+
10	Vin4 -
11	Vin5+
12	Vin5-
13	Vout0+
14	Vout0 -
15	Vout1+
16	Vout1 -
17	DO0
18	DO1
19	DI0
20	DI1
21	COM

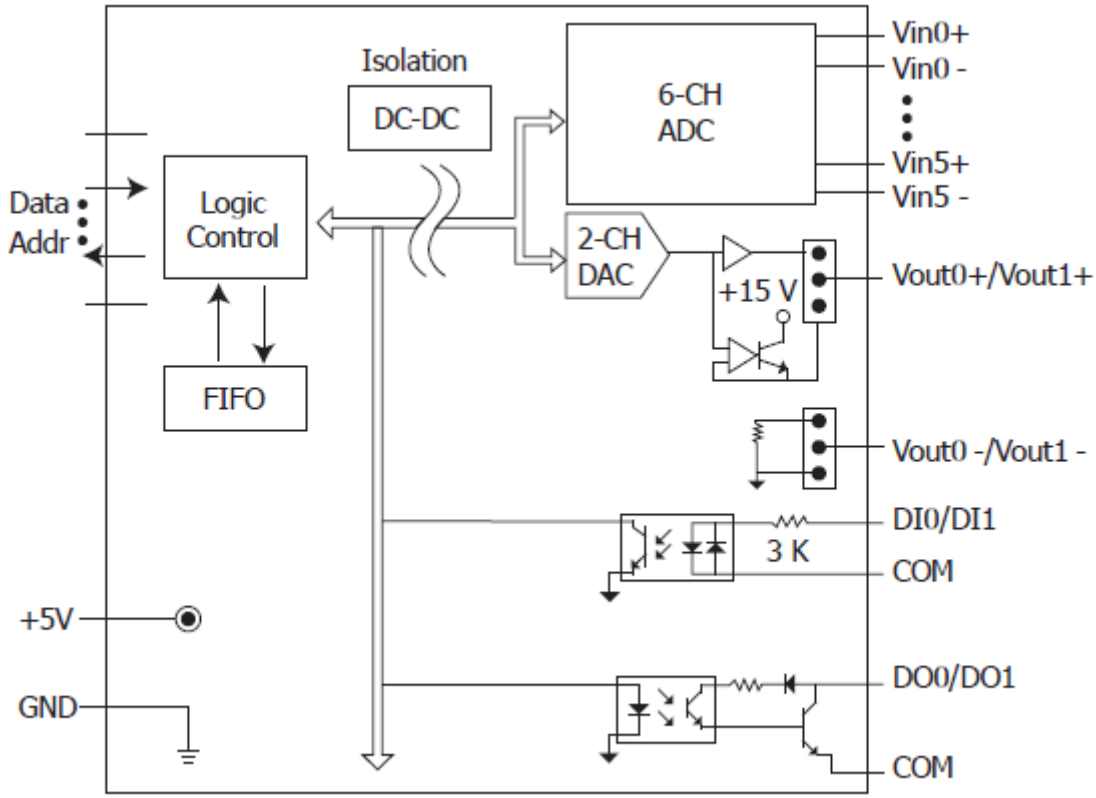
Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved. E-mail: service@icpdas.com

1.3. Wire Connections

<table>
<tr><th colspan="3">Voltage Input</th></tr>
<tr><td colspan="3"> 
</td></tr>
<tr><th colspan="3">Current Input</th></tr>
<tr><td colspan="3"> 
</td></tr>
<tr><th colspan="3">Voltage Output</th></tr>
<tr><td colspan="3"> 
</td></tr>
<tr><th colspan="3">Current Output</th></tr>
<tr><td colspan="3"> 
</td></tr>
<tr><th>Digital Input/
Counter</th><th>ON State
Readback as 1</th><th>OFF State
Readback as 0</th></tr>
<tr><td>Wet Contact
(Sink)</td><td> 
</td><td> 
</td></tr>
<tr><th>Digital Output</th><th>ON State
Readback as 1</th><th>OFF State
Readback as 0</th></tr>
<tr><td>Open Collector
(Sink)</td><td> 
</td><td> 
</td></tr>
</table>

Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved. E-mail: service@icpdas.com

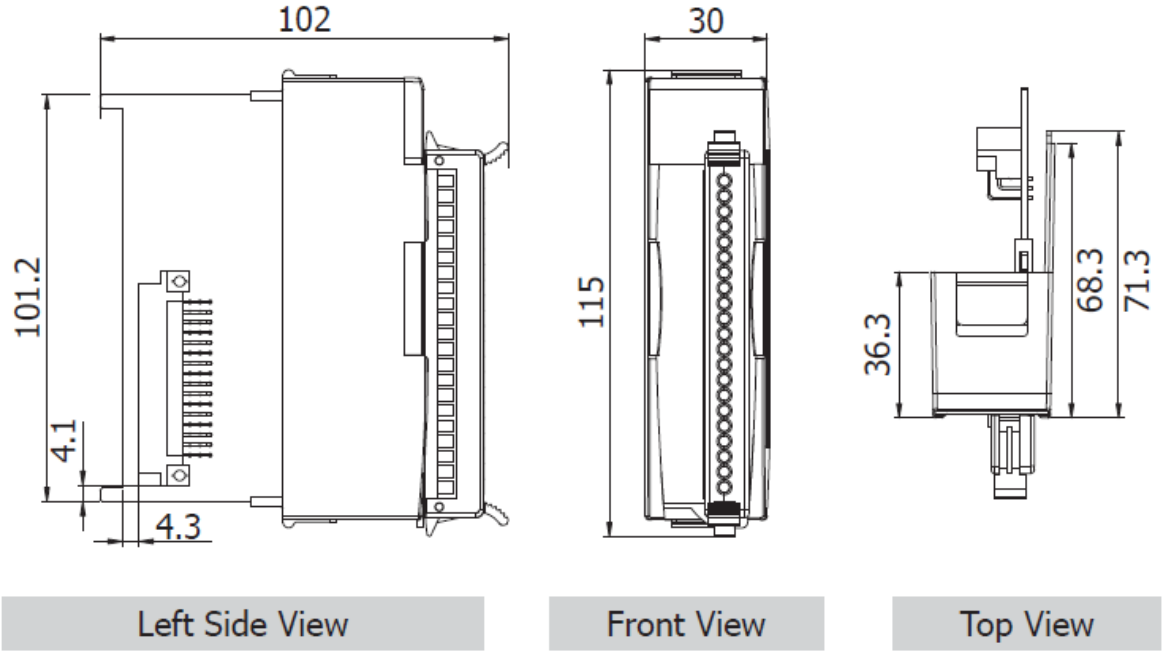
1.4. Internal I/O Structure



Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved. E-mail: service@icpdas.com

1.5. Dimensions

Units: mm



Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved. E-mail: service@icpdas.com

2. Quick Start

ICP DAS provides a range of demo programs for different platforms that can be used to verify the functions of the I-8026W. The source code contained in these programs can also be reused in your own custom programs if needed. The executable file, can be used to retrieve the basic configuration information related to the module and to verify the AI read functions. The basic configuration information includes:

- The version number and the FPGA version information
- The gain and offset values for each input range and each channel
- The data read from each channel

1. First, user need to download LinPAC SDK, which is includes GNU toolchain, Libraries, header, examples files, etc.
2. Check the power cable, Ethernet cable, VGA monitor, the communication cable between controller and PC has been connected well, and then check the I-8026W has been plugged in the controller.
3. Next, check the communication between controller and PC is fine, and download the demo program files to the controller.
4. User can find the related files in the product CD or below website: http://www.icpdas.com/root/product/solutions/pac/linpac/linpac-8000_download.html

Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved. E-mail: service@icpdas.com

3. API Functions

ICP DAS provides APIs, libraries and demo programs, including the source code, The following is an overview of the functions provided in the LinPAC library for use with the Linux platform. Detailed information related to individual functions can be found in the following sections.

Function List

The following is a list of the functions provided in the libi8k.a for the Linux platform.

Function	Description
i8026W_Init	Initializes the driver and confirms the hardware ID.
i8026W_GetFirmwareVer	Retrieves the version number for the FPGA firmware for troubleshooting purposes.
i8026W_GetLibVersion	Retrieves the version number of the 8026W.lib file.
i8026W_ReadAOGainOffset	Retrieves the Analog Output Gain and Offset values for each output type.
i8026W_WriteAO	Writes an output value to a single specified Analog Output channel in float format.
i8026W_WriteAOHex	Writes a value to a single specified Analog Output channel in hexadecimal format.
i8026W_ReadbackAO	Reads a calibrated Analog Output value from a single specified channel in float format.
i8026W_ReadbackAOHex	Reads a calibrated Analog Output value from a single specified channel in hexadecimal format.
i8026W_WriteDO	Writes the Digital Output value to the I-8026W module.
i8026W_WriteDOBit	Sets a specific Digital Output channel of the I-8026W module to ON or OFF.
i8026W_ReadDIO	Reads the Digital Input and Digital Output value from the I-8026W module.
i8026W_ReadAI	Reads a calibrated Analog Input value from a single specified channel in float format.
i8026W_ReadAIHex	Reads a calibrated Analog Input value from a single specified channel in hexadecimal format.
i8026W_ReadAIGainOffset	Retrieves the Analog Input reference Gain and Offset values for each input type and for each channel.

Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved. E-mail: service@icpdas.com

3.1. i8026W_Init

This function is used to initialize the driver and confirm the hardware ID information.

Prototype

short i8026W_Init(int slot);

Parameters

slot: specifies the slot number (1 ~ 8)

Return Values

0 = the module inserted in the slot is an I-8026W.

-1 = there are no I-8026W modules inserted in this slot.

For other return values, see the Error Codes in Appendix A.

Note

Before executing any functions on the I-8026W, the *i8026W_Init* function needs be called once for each I-8026W module inserted in the controller unit. For example, if there are two or more I-8026W modules inserted in the controller, the *i8026W_Init* function must be individually called for each I-8026W module by including the number of the slot where the I-8026W module is inserted.

Example

[C]

```
int slotIndex ,err;
Open_Slot(slotIndex);
err=i8026W_Init(slotIndex);
if(err==0)
        printf("There is an I-8026W module in slot %d\n",slotIndex);
else
        printf("There is no I-8026W module in slot %d\n",slotIndex);
```


Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved. E-mail: service@icpdas.com

3.2. i8026W_GetFirmwareVer

This function is used to retrieve the version information for the FPGA firmware. The function is only used for troubleshooting or recording purposes.

Prototype

short i8026W_GetFirmwareVer(int slot);

Parameters

slot: specifies the slot number (1 ~ 8)

Return Values

The version information of the FPGA firmware for the I-8026W module

Example

[C]

```
short ver=0, slot=1;
Open_Slot(slot);
ver= i8026W_GetFirmwareVer (slot);

printf ( "\nFirmware Version =: %04X",ver );
```


Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved. E-mail: service@icpdas.com

3.3. i8026W_GetLibVersion

This function is used to retrieve the version information for the I-8026W. The function is only used for troubleshooting or recording purposes.

Prototype

short i8026W_GetLibVersion(void);

Parameters

None

Return Values

The version information for the I-8026W

Example

[C]

```
short version;
Open_Slot(slot);
version = i8026W_GetLibVersion();
printf("\nLibrary Version =: %04X",i8026W_GetLibVersion());
```


Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved. E-mail: service@icpdas.com

3.4. i8026W_ReadAOGainOffset

This function is used to read the gain and offset values for each output type set for a specified Analog Output channel.

Prototype

```
void i8026W_ReadAOGainOffset
(
    int slot, int ch, int gain, unsigned short* gainValue, short* offsetValue
);
```

Parameters

slot: specifies the slot number (1 ~ 8)

ch: specifies the Analog Output channel number (0 ~ 1)

gain: specifies the input type (0 - 4), where:

0: +/-10 V, 1: +/-5 V, 2: +/-2.5 V, 3: +/-1.25 V, 4: +/-20 mA

*gainValue: [Output] the gain value for the Analog Output range

*offsetValue: [Output] the offset value for the Analog Output range

Return Values

None

Example

[C]

```
int slot=1;    unsigned short gVal=0;    short oVal=0;
Open_Slot(slot);
for(ch=0;ch<2;ch++)
{
    i8026W_ReadGainOffset(slot,ch,gain,&gVal,&oVal);
    printf("\nThe Gain and Offset values for the Calibration are:
    Gain=%u; Offset=%d", gVal, oVal);
}
```


Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved. E-mail: service@icpdas.com

3.5. i8026W_WriteAO

This function is used to write the output value to a single specified Analog Output channel in floating point format.

Prototype

short i8026W_WriteAO(int slot, int ch, short gain, float fData);

Parameters

slot: specifies the slot number (1 ~ 8)

ch: specifies the Analog Output channel number (0 - 2)

gain: specifies the input type (0 - 4), where:

0: +/-10 V, 1: +/-5 V, 2: +/-2.5 V, 3: +/-1.25 V, 4: +/-20 mA

fData: the Analog Output data in floating point format

Return Values

0 = No Error

For other return values, see the Error Codes in Appendix A.

Example

[C]

```
int slot,ch,gain;
float fVal=0.0;
slot = 1;
gain = 0;      // "+/-10 V"
Open_Slot(slot);
for(ch=0;ch<2;ch++)
{
    fVal = 5.0;
    i8026W_WriteAO ( slot, ch, gain, fVal);
    printf("\n[%02d]= [ %05.4f ]",ch,,fVal);
}
```


Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved. E-mail: service@icpdas.com

3.6. i8026W_WriteAOHex

This function is used to write the output value to a single specified Analog Output channel in hexadecimal format.

Prototype

short i8026W_WriteAOHex(int slot, int ch, short gain, short hData);

Parameters

slot: specifies the slot number (1 ~ 8)

ch: specifies the Analog Output channel number (0 ~ 2)

gain: specifies the input type (0 - 4), where:

0: +/-10 V, 1: +/-5 V, 2: +/-2.5 V, 3: +/-1.25 V, 4: +/-20 mA

hData: the Analog Output data in hexadecimal format

Return Values

0 = No Error

For other return values, see the Error Codes in Appendix A.

Example

[C]

```
int slot,ch,gain;
short hVal=0;
slot = 1;
gain = 0;      // "+/-10 V"
Open_Slot(slot);
for(ch=0;ch<2;ch++)
{
    hVal =0x3fff;
    i8026W_WriteAOHex( slot, ch, gain, hVal);
}
```


Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved. E-mail: service@icpdas.com

Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved.

3.7. i8026W_ReadbackAO

This function is used to read the calibrated output value from a single specified Analog Output channel floating point.

Prototype

short float i8026W_ReadbackAO(int slot, int ch, float* fVal);

Parameters

slot: specifies the slot number (1 ~ 8)

ch: specifies the Analog Output channel number (0 ~ 2)

*fVal: [Output] the value read from memory that is written to the module

Return Values

0 = No Error

For other return values, see the Error Codes in Appendix A.

Example

[C]

```
int slot,ch;
float fVal=0.0;

slot = 1;
Open_Slot(slot);
for(ch=0;ch<6;ch++)
{
   i8026W_ReadbackAO( slot, ch, &fVal);
   printf("\n[%02d]= [ %05.4f ]",ch,fVal);
}
```


Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved. E-mail: service@icpdas.com

3.8. i8026W_ReadbackAOHex

This function is used to read the calibrated output value from a single specified Analog Output channel in hexadecimal format.

Prototype

short i8026W_ReadbackAOHex(int slot, int ch, short* hVal);

Parameters

slot: specifies the slot number (1 ~ 8)

ch: specifies the Analog Output channel number (0 ~ 2)

*hVal: [Output] the value read from memory that written to the module

Return Values

0 = No Error

For other return values, see the Error Codes in Appendix A.

Example

[C]

```
int slot, ch;
short hVal=0;
slot 1=1;
Open_Slot(slot);
for(ch=0;ch<2;ch++)
{
        fVal = i8026W_ReadbackAOHex (slot, ch);
        printf("\n[%02d]= [ %04X ]",ch, hVal);
}
```


Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved. E-mail: service@icpdas.com

3.9. i8026W_WriteDO

This function is used to write the Digital Output value to the I-8026W module.

Prototype

short i8026W_WriteDO(int slot, short hData);

Parameters

slot: specifies the slot number (1 ~ 8)

hData: the Digital Output value (0 ~ 3), as per the table below

Output Value	CH0	CH1
0	OFF	OFF
1	ON	OFF
2	OFF	ON
3	ON	ON

Return Values

0 = No Error

For other return values, see the Error Codes in Appendix A.

Example

[C]

```
int slot,ch,gain;
short hVal=3;
slot = 1;
Open_Slot(slot);
i8026W_WriteDO (slot, hVal);
```


Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved. E-mail: service@icpdas.com

3.10. i8026W_WriteDOBit

This function is used to set a specific Digital Output channel on the I-8026W module ON or OFF.

Prototype

short i8026W_WriteDOBit(**int** slot, **int** ch, **int** bitStatus);

Parameters

slot: specifies the slot number (1 ~ 8)

ch: specifies the Digital Output channel number (0 ~ 1)

bitVal: specifies the status of the digital output, where:

0: OFF

1: ON

Return Values

0 = No Error

For other return values, see the Error Codes in Appendix A.

Example

[C]

```
int slot,ch, bitVal;

slot = 1;
ch = 0;
bitVal =1;
Open_Slot(slot);
i8026W_WriteDOBit (slot,ch, bitVal);
```


Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved. E-mail: service@icpdas.com

3.11. i8026W_ReadDIO

This function is used to read the Digital Input and Digital Output values from the I-8026W module.

Prototype

```
short i8026W_ReadDIO (
    int slot, short* diVal, short* doVal,unsigned char diBitArr[], unsigned char doBitArr[]
);
```

Parameters

slot: specifies the slot number (1 ~ 8)

*diVal: [Output] the Digital Input data

*doVal: [Output] the Digital Output data

diBitArr: [Output] the bit status of the Digital Input data

doBitArr: [Output] the bit status of the Digital Output data

Return Values

0 = No Error

For other return values, see the Error Codes in Appendix A.

Example

[C]

```
int slot=1, diVal=0, doVal=0;
unsigned char diBitArr[2], doBitArr[2];
Open_Slot(slot);
i8026W_ReadDIO(slot, &diVal, &doVal, diBitArr, doBitArr);
printf("\n DI=[%02X]; DO=[ %02X ]", diVal ,doVal);
```


Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved. E-mail: service@icpdas.com

3.12. i8026W_ReadAI

This function is used to read the calibrated input value from a single specified Analog Input channel in floating point format.

Prototype

short float i8026W_ReadAI(int slot, int ch, short gain, float* fVal);

Parameters

slot: specifies the slot number (1 ~ 8)

ch: specifies the Analog Input channel number (0 ~ 5)

gain: specifies the input type (0 - 4), where:

0: +/-10 V, 1: +/-5 V, 2: +/-2.5 V, 3: +/-1.25 V, 4: +/-20 mA

fVal: [Output] the input data in float format

Return Values

0 = No Error

For other return values, see the Error Codes in Appendix A.

Example

[C]

```
int slot,ch,gain;
float fVal=0.0;

slot = 1;
gain = 0;       // "+/-10 V"
Open_Slot(slot);
for(ch=0;ch<6;ch++)
{
   i8026W_ReadAI( slot, ch, gain, &fVal);
   printf("\n[%02d]= [ %05.4f ]",ch, fVal);
}
```


Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved. E-mail: service@icpdas.com

3.13. i8026W_ReadAIHex

This function is used to read the calibrated input value from a single specified Analog Input channel in hexadecimal format.

Prototype

short i8026W_ReadAIHex(int slot, int ch, short gain, short* hVal);

Parameters

slot: specifies the slot number (1 ~ 8)

ch: specifies the Analog Input channel number (0 - 5)

gain: specifies the input type (0 - 4), where:

0: +/-10 V, 1: +/-5 V, 2: +/-2.5 V, 3: +/-1.25 V, 4: +/-20 mA

hVal: [Output] the input data in hexadecimal format

Return Values

0 = No Error

For other return values, see the Error Codes in Appendix A.

Example

[C]

```
int slot,ch,gain;
short hVal=0.0;
slot = 1;
gain = 0;       // "+/-10 V"

Open_Slot(slot);
for(ch=0;ch<6;ch++)
{
   i8026W_ReadAIHex( slot, ch, gain,&hVal);
   printf("\n[%02d]= [ %04X ] ",ch,hVal);
}
```


Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved. E-mail: service@icpdas.com

3.14. i8026W_ReadAIGainOffset

This function is used to read the reference gain and offset values for each Analog Input channel and each input type.

Prototype

```
short i8026W_ReadAIGainOffset
(
    int slot, int ch, int gain, unsigned short* refGain, short * refOffset
);
```

Parameters

slot: specifies the slot number (1 ~ 8)

ch: specifies the Analog Input channel number (0 ~ 5)

gain: specifies the input type (0 ~ 4), where:

0: +/-10 V, 1: +/-5 V, 2: +/-2.5 V, 3: +/-1.25 V, 4: +/-20 mA

*refGain: [Output] the reference gain value for the Analog Input type

*refOffset: [Output] the reference offset value for the Analog Input type

Return Values

0 = No Error

For other return values, see the Error Codes in Appendix A.

Example

[C]

```
unsigned short gVal=0;
short oVal=0;
int slot=2;
Open_Slot(slot);
i8026W_ ReadAIGainOffset (slot,gain,&gVal, &oVal);
printf("\nThe Gain = %04X ,    Offset = %04X ",gVal, oVal);
```


Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved. E-mail: service@icpdas.com

Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved.

4. Troubleshooting

This chapter discusses how to solve some common problems you may encounter while operating the I-8026W module.

This chapter contains:

- Service request requirements
- What to do when the data read from the I-8026W module seems unstable

Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved. E-mail: service@icpdas.com

4.1. Service Request Requirements

If you are using a stable signal source, such as a battery, to output a signal to the I-8026W module and are receiving incorrect or unstable data, prepare the following three items and e-mail them to service@icpdas.com.

- An image of the physical wiring
- The file saved from the Basic Information tab

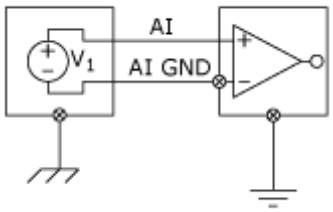
Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved. E-mail: service@icpdas.com

4.2. What to do when the data read from the I-8026W seems unstable

If the voltage can be measured correctly when testing using a battery, but not when using the real signal source, the error may be caused by any or all of the following factors:

- A noise-corrupted signal source
- Instability in the signal source
- A floating signal source that is not referenced to a system ground point (earth or building ground)

Because of the nature of the high speed data acquisition function on the I-8026W module, any noise coupled to a signal, or any change in voltage on an unstable source, is also captured. In this situation, signal filtering or isolation should be considered in order to enhance the quality of the signal.



It is recommended to connect the V- to AGND (system ground) when measuring differential signals as the figure shows as below:

Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved. E-mail: service@icpdas.com

Appendix A. Error Codes

Error Code	Definition	Description
0	OK	This indicates that there have been no errors.
-1	ID_ERROR	There was a problem with the module ID.
-2	SLOT_ERROR	There was a slot index error. Slot numbers should be in the range of 0 to 7.
-3	CHANNEL_ERROR	There was a channel index error. Channel numbers should be in the range of 0 to 15.
-4	GAIN_ERROR	There was a gain index error. gain numbers should be in the range of 0 to 4.
-6	NOT_SUPPORT_ERROR	Reading invalid value.

Copyright © 2015 ICP DAS Co., Ltd. All Rights Reserved. E-mail: service@icpdas.com