

Functions listed in alphabetical order

pi40iv Can Connect Channels-.vi

This function verifies that the switch module is capable of creating a path between the two channels you specify with the Channel 1 and Channel 2 parameters. If the switch module is capable of creating a path, this function indicates whether the path is currently available given the existing connections.

If the path is not available due to the currently existing connections, but the implicit connection between the two channels already exists, the function returns the PI40IV_WARN_IMPLICIT_CONNECTION_EXISTS (0x3FFA2002) warning.



instrument handle The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

channel 1 You identify a path with two channels. Pass one of the channel names for which you want to verify a path. Pass the other channel name as the Channel 2 parameter.

Valid channel names depend on type of card used.

Default Value: ""

channel 2 You identify a path with two channels. Pass one of the channel names for which you want to verify a path. Pass the other channel name as the Channel 1 parameter.

Valid channel names depend on type of card used.

Default Value: ""

error in (no error) The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

code The **code** input identifies the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

instrument handle out The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.


Default Value: None

 **path capability** Indicates whether a path is valid. Possible values include:


Status Name	Actual Value
PI40IV_VAL_PATH_AVAILABLE	1
PI40IV_VAL_PATH_EXISTS	2
PI40IV_VAL_PATH_UNSUPPORTED	3
PI40IV_VAL_RSRC_IN_USE	4
PI40IV_VAL_SOURCE_CONFLICT	5
PI40IV_VAL_CHANNEL_NOT_AVAILABLE	6

Notes:


- (1) PI40IV_VAL_PATH_AVAILABLE indicates that the driver can create the path at this time.
- (2) PI40IV_VAL_PATH_EXISTS indicates that the path already exists.
- (3) PI40IV_VAL_PATH_UNSUPPORTED indicates that the instrument is not capable of creating a path between the channels you specify.
- (4) PI40IV_VAL_RSRC_IN_USE indicates that although the path is valid, the driver cannot create the path at this moment because the switch module is currently using one or more of the required channels to create another path. You must destroy the other path before creating this one.
- (5) PI40IV_VAL_SOURCE_CONFLICT indicates that the instrument cannot create a path because both channels are connected to a different source channel.
- (6) PI40IV_VAL_CHANNEL_NOT_AVAILABLE indicates that the driver cannot create a path between the two channels because one of the channels is a configuration channel and thus unavailable for external connections.

 **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

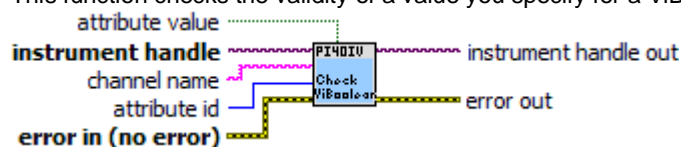
The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

pi40iv Check Attribute ViBoolean.vi

This function checks the validity of a value you specify for a ViBoolean attribute.



 **channel name** You identify a path with two channels. Pass one of the channel names for which you want to obtain a path. Pass the other channel name as the Channel 1 parameter.



Valid channel names depend on type of card used.

Default Value: ""



attribute id Pass the ID of an attribute.

Most used attributes:

1250001 - PI40IV_ATTR_IS_SOURCE_CHANNEL

1250003 - PI40IV_ATTR_IS_CONFIGURATION_CHANNEL



attribute value Pass the value which you want to verify as a valid value for the attribute.

Default Value: False



error in (no error) The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



instrument handle The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None



error out The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.




code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



source The **source** string describes the origin of the error or warning.

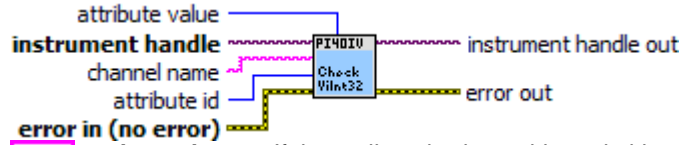
The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

pi40iv Check Attribute Vilnt32.vi


This function checks the validity of a value you specify for a Vilnt32 attribute.




 **channel name** If the attribute is channel-based, this parameter specifies the name of the channel on which to set the value of the attribute. If the attribute is not channel-based, then pass VI_NULL or an empty string.


Valid channel name depends on type of card used.

Default Value: ""


 **attribute id** Pass the ID of an attribute.

 **attribute value** Pass the value which you want to verify as a valid value for the attribute.


Default Value: 0

 **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.


Default Value: None

 **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.

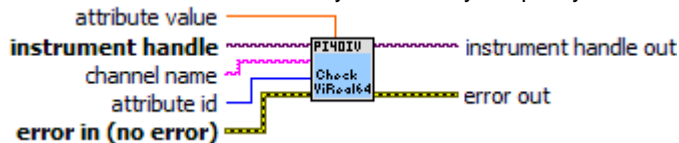
The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

pi40iv Check Attribute ViReal64.vi


This function checks the validity of a value you specify for a ViReal64 attribute.




 **channel name** If the attribute is channel-based, this parameter specifies the name of the channel on which to set the value of the attribute. If the attribute is not channel-based, then pass VI_NULL or an empty string.


Valid channel name depends on type of card used.

Default Value: ""


 **attribute id** Pass the ID of an attribute.

 **attribute value** Pass the value which you want to verify as a valid value for the attribute.


Default Value: 0

 **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



instrument handle The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None



error out The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

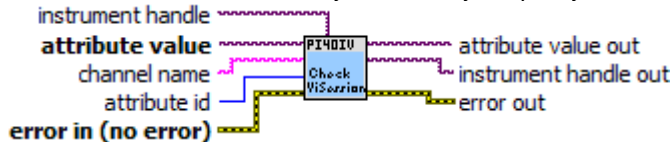


instrument handle out The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

pi40iv Check Attribute ViSession.vi

This function checks the validity of a value you specify for a ViSession attribute.



channel name If the attribute is channel-based, this parameter specifies the name of the channel on which to set the value of the attribute. If the attribute is not channel-based, then pass VI_NULL or an empty string.

Valid channel name depends on type of card used.

Default Value: ""



attribute id Pass the ID of an attribute.



error in (no error) The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I32 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

abc **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I/O **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

I/O **attribute value** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

error out The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

TF **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I32 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

abc **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I/O **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

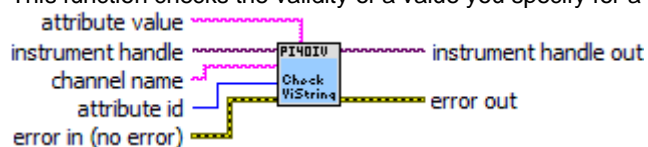
Default Value: None

I/O **attribute value out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

pi40iv Check Attribute ViString.vi

This function checks the validity of a value you specify for a ViString attribute.




abc **channel name** If the attribute is channel-based, this parameter specifies the name of the channel on which to set the value of the attribute. If the attribute is not channel-based, then pass VI_NULL or an empty string.



Valid channel name depends on type of card used.

Default Value: ""

 **attribute id** Pass the ID of an attribute.

From the function panel window, you can use this control as follows.


- Click on the control or press <ENTER>, <spacebar>, or <ctrl-down arrow>, to display a dialog box containing a hierarchical list of the available attributes. Attributes whose value cannot be set are dim. Help text is shown for each attribute. Select an attribute by double-clicking on it or by selecting it and then pressing <ENTER>.


Read-only attributes appear dim in the list box. If you select a read-only attribute, an error message appears.

A ring control at the top of the dialog box allows you to see all IVI attributes or only the attributes of the ViString type. If you choose to see all IVI attributes, the data types appear to the right of the attribute names in the list box. Attributes with data types other than ViString are dim. If you select an attribute data type that is dim, LabWindows/CVI transfers you to the function panel for the corresponding function that is consistent with the data type.


- If you want to enter a variable name, press <CTRL-T> to change this ring control to a manual input box.

- If the attribute in this ring control has named constants as valid values, you can view the constants by moving to the Attribute Value control and pressing <ENTER>.


 **attribute value** Pass the value which you want to verify as a valid value for the attribute.

 **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.



Default Value: None



error out The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



instrument handle out The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

pi40iv Clear Error Info.vi

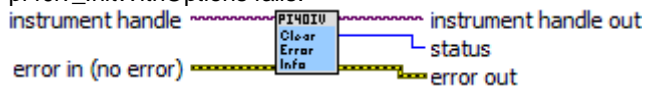
This function clears the error information for the current execution thread and the IVI session you specify. If you pass VI_NULL for the Instrument Handle parameter, this function clears the error information only for the current execution thread.

The error information includes a primary error code, secondary error code, and an error elaboration string. For a particular session, this information is the same as the values held in the following attributes:

PI40IV_ATTR_PRIMARY_ERROR
PI40IV_ATTR_SECONDARY_ERROR
PI40IV_ATTR_ERROR_ELABORATION

This function sets the primary and secondary error codes to VI_SUCCESS (0), and sets the error elaboration string to "".

The IVI Library also maintains this error information separately for each thread. This is useful if you do not have a session handle to pass to pi40iv_ClearErrorInfo or pi40iv_GetErrorInfo, which occurs when a call to pi40iv_init or pi40iv_InitWithOptions fails.



error in (no error) The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



instrument handle The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None



status Returns the status code of this operation. The status code either indicates success or describes an error or warning condition. You examine the status code from each call to an instrument driver function to determine if an error occurred.

To obtain a text description of the status code, call the pi40iv_error_message function. To obtain additional information about the error condition, call the pi40iv_GetErrorInfo function. To clear the error information from the driver, call the pi40iv_ClearErrorInfo function.

The general meaning of the status code is as follows:

Value	Meaning
0	Success
Positive Values	Warnings
Negative Values	Errors

This driver defines the following status codes:

```
Status   Description
-----
WARNINGS:
/*=CHANGE:=====*
Insert Instrument-defined warning codes here.
*=====END=CHANGE=*/

ERRORS:
/*=CHANGE:=====*
Insert Instrument-defined error codes here.
*=====END=CHANGE=*/
```


This instrument driver also returns errors and warnings defined by other sources. The following table defines the ranges of additional status codes that this driver can return. The table lists the different include files that contain the defined constants for the particular status codes:

Numeric Range (in Hex)	Status Code Types
3FFA2000 to 3FFA3FFF	IviSwtch Warnings
3FFA0000 to 3FFA1FFF	IVI Warnings
3FFF0000 to 3FFFFFFF	VISA Warnings
3FFC0000 to 3FFCFFFF	VXIPnP Driver Warnings
BFFA2000 to BFFA3FFF	IviSwtch Errors
BFFA0000 to BFFA1FFF	IVI Errors
BFFF0000 to BFFFFFFF	VISA Errors
BFFC0000 to BFFCFFFF	VXIPnP Driver Errors




error out The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.


Default Value: None

pi40iv Clear Interchange Warnings.vi


This function clears the list of current interchange warnings.

instrument handle  **instrument handle out**


error in (no error)  **error out**

 **instrument handle** The ViSession handle that you obtain from the as701x_init or as701x_InitWithOptions function. The handle identifies a particular instrument session.


Default Value: None

 **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **instrument handle out** The ViSession handle that you obtain from the as701x_init or as701x_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None


 **error out** The **error out** cluster passes error or warning information out of a VI to be used by other

VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

pi40iv Close.vi

This function performs the following operations:


- Closes the instrument I/O session.
- Destroys the instrument driver session and all of its attributes.
- Deallocates any memory resources the driver uses.

Notes:


(1) You must unlock the session before calling pi40iv_close.

(2) After calling pi40iv_close, you cannot use the instrument driver again until you call pi40iv_init or pi40iv_InitWithOptions.




 **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.


Default Value: None

 **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.



The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



error out The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

pi40iv Connect Channels.vi

This function creates a path between Channel 1 and Channel 2. The driver calculates the shortest path between the two channels.

If a path is not available, the function returns one of the following errors:

PI40IV_ERROR_EXPLICIT_CONNECTION_EXISTS (0xBFFA200C), if the two channels are already explicitly connected by calling either the pi40iv_Connect or pi40iv_SetPath function.

PI40IV_ERROR_IS_CONFIGURATION_CHANNEL (0xBFFA2009), if a channel is a configuration channel. Error elaboration contains information about which of the two channels is a configuration channel.

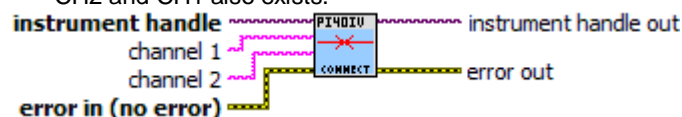
PI40IV_ERROR_ATTEMPT_TO_CONNECT_SOURCES (0xBFFA200B), if both channels are connected to a different source. Error elaboration contains information about sources channel 1 and 2 connect to.


PI40IV_ERROR_CANNOT_CONNECT_TO_ITSELF (0xBFFA2015), if channels 1 and 2 are one and the same channel.

PI40IV_ERROR_PATH_NOT_FOUND (0xBFFA2011), if the driver cannot find a path between the two channels.


Notes:

- (1) The paths are bidirectional. For example, if a path exists between channels CH1 and CH2, then the path between channels CH2 and CH1 also exists.




 **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

 **channel 1** You identify a path with two channels. Pass one of the channel names for which you want to create a path. Pass the other channel name as the Channel 2 parameter.


Valid channel names depend on type of card used.

Default Value: ""


 **channel 2** You identify a path with two channels. Pass one of the channel names for which you want to create a path. Pass the other channel name as the Channel 1 parameter.

Valid channel names depend on type of card used.


Default Value: ""

 **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.


Default Value: None

 **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.




 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


pi40iv Disable.vi

This function places the instrument in a quiescent state where it has minimal or no impact on the system to which it is connected.




 **instrument handle** The ViSession handle that you obtain from the as701x_init or as701x_InitWithOptions function. The handle identifies a particular instrument session.


Default Value: None

 **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **instrument handle out** The ViSession handle that you obtain from the as701x_init or as701x_InitWithOptions function. The handle identifies a particular instrument session.


Default Value: None

 **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


pi40iv Disconnect All Channels.vi

This function disconnects all existing paths.


Note: If the switch module is not capable of disconnecting all paths, this function returns PI40IV_WARN_PATH_REMAINS (0x3FFA2001) warning.

instrument handle  **instrument handle out**


error in (no error)  **error out**

 **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.


Default Value: None

 **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.


Default Value: None

 **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


pi40iv Disconnect Channels.vi

This function destroys the path between two channels that you create with the pi40iv_Connect or pi40iv_SetPath function.




 **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

 **channel 1** You identify a path with two channels. Pass one of the channel names that identify the path you want to destroy. Pass the other channel name as the Channel 2 parameter.


Valid channel names depend on type of card used.

Default Value: ""


 **channel 2** You identify a path with two channels. Pass one of the channel names that identify the path you want to destroy. Pass the other channel name as the Channel 1 parameter.

Valid channel names depend on type of card used.


Default Value: ""

 **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.


Default Value: None

 **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

pi40iv Error Message.vi


This function converts a status code returned by an instrument driver function into a user-readable string.




 **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

You can pass VI_NULL for this parameter. This is useful when one of the initialize functions fail.


Default Value: VI_NULL

 **error code** Pass the Status parameter that is returned from any of the instrument driver functions.


Default Value: 0 (VI_SUCCESS)

 **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

You can pass VI_NULL for this parameter. This is useful when one of the initialize functions fail.

Default Value: VI_NULL

 **error message** Returns the user-readable message string that corresponds to the status code you



specify.



error out The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

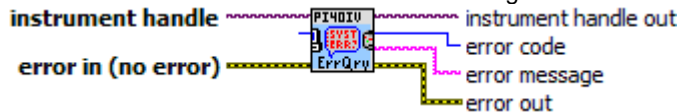


source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

pi40iv Error-Query.vi

This function reads an error code and a message from the instrument's error queue.



instrument handle The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None



size of error message Maximum length of error message. This must be at least 256.



error in (no error) The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



instrument handle out The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.



Default Value: None



error code Returns the error code read from the instrument's error queue.



error message Returns the error message string read from the instrument's error message queue.



error out The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

pi40iv Example.vi

Acts as a get started program for Pickering PXI IVI driver (pi40iv).



pi40iv Get Attribute ViBoolean.vi

This function queries the value of a ViBoolean attribute.

You can use this function to get the values of instrument- specific attributes and inherent IVI attributes. If the attribute represents an instrument state, this function performs instrument I/O in the following cases:

- State caching is disabled for the entire session or for the particular attribute.
- State caching is enabled and the currently cached value is invalid.



channel name You identify a path with two channels. Pass one of the channel names for which you want to obtain a path. Pass the other channel name as the Channel 1 parameter.

Valid channel names depend on type of card used.

Default Value: ""



attribute id Pass the ID of an attribute.

Most used attributes:

- 1250001 - PI40IV_ATTR_IS_SOURCE_CHANNEL
- 1250002 - PI40IV_ATTR_IS_DEBOUNCED
- 1250003 - PI40IV_ATTR_IS_CONFIGURATION_CHANNEL




error in (no error) The **error in** cluster can accept error information wired from VIs previously




called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None


 **attribute value** Returns the current value of the attribute. Pass the address of a ViBoolean variable.

 **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

pi40iv Get Attribute ViInt32.vi

This function queries the value of a ViInt32 attribute.

You can use this function to get the values of instrument- specific attributes and inherent I/O attributes. If the attribute represents an instrument state, this function performs instrument I/O in the following cases:



- State caching is disabled for the entire session or for the particular attribute.

- State caching is enabled and the currently cached value is invalid.



channel name You identify a path with two channels. Pass one of the channel names for which you want to obtain a path. Pass the other channel name as the Channel 1 parameter.

Valid channel names depend on type of card used.

Default Value: ""

attribute id Pass the ID of an attribute.

Most used attributes:

- 1150003 - PI40IV_ATTR_CHANGEOVER
- 1250017 - PI40IV_ATTR_WIRE_MODE
- 1050203 - PI40IV_ATTR_CHANNEL_COUNT
- 1250019 - PI40IV_ATTR_NUM_OF_COLUMNS
- 1250018 - PI40IV_ATTR_NUM_OF_ROWS
- 1050101 - PI40IV_ATTR_PRIMARY_ERROR
- 1050102 - PI40IV_ATTR_SECONDARY_ERROR
- 1150001 - PI40IV_ATTR_VXI_MANF_ID
- 1150002 - PI40IV_ATTR_VXI_MODEL_CODE
- 1050515 - PI40IV_ATTR_SPECIFIC_DRIVER_CLASS_SPEC_MAJOR_VERSION
- 1050516 - PI40IV_ATTR_SPECIFIC_DRIVER_CLASS_SPEC_MINOR_VERSION

error in (no error) The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

instrument handle The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

attribute value Returns the current value of the attribute. Pass the address of a VInt32 variable.

error out The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error

displayed.

TF **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I32 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

abc **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I/O **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

pi40iv Get Attribute ViReal64.vi

This function queries the value of a ViReal64 attribute.

You can use this function to get the values of instrument- specific attributes and inherent IVI attributes. If the attribute represents an instrument state, this function performs instrument I/O in the following cases:

- State caching is disabled for the entire session or for the particular attribute.
- State caching is enabled and the currently cached value is invalid.



abc **channel name** You identify a path with two channels. Pass one of the channel names for which you want to obtain a path. Pass the other channel name as the Channel 1 parameter.

Valid channel names depend on type of card used.

Default Value: ""

U32 **attribute id** Pass the ID of an attribute.

Most used attributes:

1250016 - PI40IV_ATTR_CHARACTERISTIC_IMPEDANCE
 1250007 - PI40IV_ATTR_MAX_AC_VOLTAGE
 1250006 - PI40IV_ATTR_MAX_DC_VOLTAGE
 1250011 - PI40IV_ATTR_MAX_CARRY_AC_CURRENT
 1250015 - PI40IV_ATTR_MAX_CARRY_AC_POWER
 1250010 - PI40IV_ATTR_MAX_CARRY_DC_CURRENT
 1250014 - PI40IV_ATTR_MAX_CARRY_DC_POWER
 1250009 - PI40IV_ATTR_MAX_SWITCHING_AC_CURRENT
 1250013 - PI40IV_ATTR_MAX_SWITCHING_AC_POWER
 1250008 - PI40IV_ATTR_MAX_SWITCHING_DC_CURRENT
 1250012 - PI40IV_ATTR_MAX_SWITCHING_DC_POWER
 1250004 - PI40IV_ATTR_SETTLING_TIME

Err **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.



The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



instrument handle The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None



attribute value Returns the current value of the attribute. Pass the address of a ViReal64 variable.s



error out The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



instrument handle out The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

pi40iv Get Attribute ViSession.vi

This function queries the value of a ViSession attribute.

You can use this function to get the values of instrument- specific attributes and inherent IVI attributes. If the attribute represents an instrument state, this function performs instrument I/O in the following cases:

- State caching is disabled for the entire session or for the particular attribute.
- State caching is enabled and the currently cached value is invalid.

pickering



channel name You identify a path with two channels. Pass one of the channel names for which you want to obtain a path. Pass the other channel name as the Channel 1 parameter.

Valid channel names depend on type of card used.

Default Value: ""

attribute id Pass the ID of an attribute.

Most used attributes:
1050322 - PI40IV_ATTR_IO_SESSION

error in (no error) The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

instrument handle The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

error out The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the



error displayed.



instrument handle out The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None



attribute value out The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

pi40iv Get Attribute ViString.vi

This function queries the value of a ViString attribute.

You can use this function to get the values of instrument- specific attributes and inherent IVI attributes. If the attribute represents an instrument state, this function performs instrument I/O in the following cases:

- State caching is disabled for the entire session or for the particular attribute.
- State caching is enabled and the currently cached value is invalid.

You must provide a ViChar array to serve as a buffer for the value. You pass the number of bytes in the buffer as the Buffer Size parameter. If the current value of the attribute, including the terminating NUL byte, is larger than the size you indicate in the Buffer Size parameter, the function copies Buffer Size - 1 bytes into the buffer, places an ASCII NUL byte at the end of the buffer, and returns the buffer size you must pass to get the entire value. For example, if the value is "123456" and the Buffer Size is 4, the function places "123" into the buffer and returns 7.

If you want to call this function just to get the required buffer size, you can pass 0 for the Buffer Size and VI_NULL for the Attribute Value buffer.

If you want the function to fill in the buffer regardless of the number of bytes in the value, pass a negative number for the Buffer Size parameter.



channel name You identify a path with two channels. Pass one of the channel names for which you want to obtain a path. Pass the other channel name as the Channel 1 parameter.

Valid channel names depend on type of card used.

Default Value: ""



attribute id Pass the ID of an attribute.

Most used attributes:

- 1050007 - PI40IV_ATTR_DRIVER_SETUP
- 1050401 - PI40IV_ATTR_GROUP_CAPABILITIES
- 1150004 - PI40IV_ATTR_INSTRUMENT_CONFIG
- 1050510 - PI40IV_ATTR_INSTRUMENT_FIRMWARE_REVISION
- 1050511 - PI40IV_ATTR_INSTRUMENT_MANUFACTURER
- 1050512 - PI40IV_ATTR_INSTRUMENT_MODEL
- 1050304 - PI40IV_ATTR_RESOURCE_DESCRIPTOR
- 1050305 - PI40IV_ATTR_LOGICAL_NAME
- 1050514 - PI40IV_ATTR_SPECIFIC_DRIVER_DESCRIPTION
- 1050302 - PI40IV_ATTR_SPECIFIC_DRIVER_PREFIX
- 1050551 - PI40IV_ATTR_SPECIFIC_DRIVER_REVISION
- 1050513 - PI40IV_ATTR_SPECIFIC_DRIVER_VENDOR
- 1050327 - PI40IV_ATTR_SUPPORTED_INSTRUMENT_MODELS



buffer size Pass the number of bytes in the ViChar array you specify for the Attribute Value parameter.

Default Value: 512



error in (no error) The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



instrument handle The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None



attribute value The buffer in which the function returns the current value of the attribute. The buffer must be of type ViChar and have at least as many bytes as indicated in the Buffer Size parameter.



error out The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



instrument handle out The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

pickering

This function returns the highest-level channel name that corresponds to the specific driver channel string that is in the channel table at an index you specify. By passing 0 for the buffer size, the caller can ascertain the buffer size required to get the entire channel name string and then call the function again with a sufficiently large buffer.



instrument handle The ViSession handle that you obtain from the as701x_init or as701x_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

index A 1-based index into the channel table.

buffer size Maximum length of channel name. This must be at least 256.

error in (no error) The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

instrument handle out The ViSession handle that you obtain from the as701x_init or as701x_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

channel name Returns the highest-level channel name that corresponds to the specific driver channel string that is in the channel table at an index you specify..

error out The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

abc **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

pi40iv Get Error Info.vi

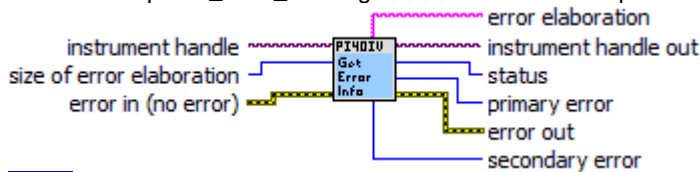
This function returns the error information associated with an IVI session or with the current execution thread. If you specify a valid IVI session for the Instrument Handle parameter, this function retrieves and then clears the error information for the session. If you pass VI_NULL for the Instrument Handle parameter, this function retrieves and then clears the error information for the current execution thread.

The error information includes a primary error, secondary error, and an error elaboration string. For a particular session, this information is the same as the values held in the following attributes:

PI40IV_ATTR_PRIMARY_ERROR
 PI40IV_ATTR_SECONDARY_ERROR
 PI40IV_ATTR_ERROR_ELABORATION

The IVI Library also maintains this error information separately for each thread. This is useful if you do not have a session handle to pass to pi40iv_GetErrorInfo or pi40iv_ClearErrorInfo, which occurs when a call to pi40iv_init or pi40iv_InitWithOptions fails.

You can call pi40iv_error_message to obtain a text description of the primary or secondary error value.



U32 **size of error elaboration**

FT **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

TF **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I32 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

abc **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I/O **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

I32 **status** Returns the status code of this operation. The status code either indicates success or describes an error or warning condition. You examine the status code from each call to an instrument driver function to determine if an error occurred.



To obtain a text description of the status code, call the `pi40iv_error_message` function. To obtain additional information about the error condition, call the `pi40iv_GetErrorInfo` function. To clear the error information from the driver, call the `pi40iv_ClearErrorInfo` function.

The general meaning of the status code is as follows:

Value	Meaning
0	Success
Positive Values	Warnings
Negative Values	Errors

This driver defines the following status codes:

```

Status   Description
-----
WARNINGS:
/*=CHANGE:=====*
Insert Instrument-defined warning codes here.
*=====END=CHANGE=*/

ERRORS:
/*=CHANGE:=====*
Insert Instrument-defined error codes here.
*=====END=CHANGE=*/

```

This instrument driver also returns errors and warnings defined by other sources. The following table defines the ranges of additional status codes that this driver can return. The table lists the different include files that contain the defined constants for the particular status codes:

Numeric Range (in Hex)	Status Code Types
3FFA2000 to 3FFA3FFF	IviSwtch Warnings
3FFA0000 to 3FFA1FFF	IVI Warnings
3FFF0000 to 3FFFFFFF	VISA Warnings
3FFC0000 to 3FFCFFFF	VXIPnP Driver Warnings
BFFA2000 to BFFA3FFF	IviSwtch Errors
BFFA0000 to BFFA1FFF	IVI Errors
BFFF0000 to BFFFFFFF	VISA Errors
BFFC0000 to BFFCFFFF	VXIPnP Driver Errors

132 **primary error** The primary error code for the session or execution thread. The value is the same as the one held by the attribute `PI40IV_ATTR_PRIMARY_ERROR`.

A value of `VI_SUCCESS` (0) indicates that no error occurred, A positive value indicates a warning. A negative value indicates an error.

You can call `pi40iv_error_message` to get a text description of the value.

If you are not interested in this value, you can pass `VI_NULL`.

132 **secondary error** The secondary error code for the session or execution thread. If the primary error code is non-zero, the secondary error code can further describe the error or warning condition. The value is the same as the one held by the attribute `PI40IV_ATTR_SECONDARY_ERROR`.

A value of `VI_SUCCESS` (0) indicates no further description.

You can call `pi40iv_error_message` to get a text description of the value.

If you are not interested in this value, you can pass `VI_NULL`.



error elaboration The error elaboration string for the session or execution thread. If the primary error code is non-zero, the elaboration string can further describe the error or warning condition. The value is the same as the one held by the attribute PI40IV_ATTR_ERROR_ELABORATION.

If you are not interested in this value, you can pass VI_NULL. Otherwise, you must pass a ViChar array with at least 256 bytes.



error out The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

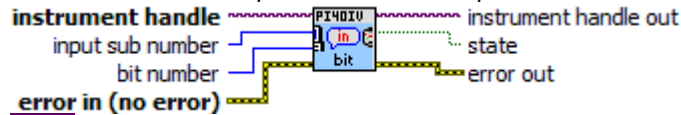


instrument handle out The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

pi40iv Get Input Bit.vi

Get state of selected input bit on selected input subunit of Pickering card



instrument handle The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None



input sub number sub-unit of target to read (unity-based)



bit number input bit number (unity-based)



error in (no error) The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

pickering

I32 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

abc **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I/O **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

TF **state** Logical state of input bit

err **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

TF **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I32 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

abc **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

pi40iv Get Input Size Bits.vi

Get number of bits in selected input subunit of Pickering card



I/O **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

U32 **input sub number** sub-unit of target to read (unity-based)

err **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

TF **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the



error displayed.

I32 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

abc **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I/O **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

U32 **size** Number of bits in input subunit

err **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

TF **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I32 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

abc **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

pi40iv Get Input Size Dwords.vi

Get number of DWORDs that need to be allocated to work with array functions on this subunit



I/O **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

U32 **input sub number** sub-unit of target (unity-based)


err **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

TF **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.




The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None


 **size** Number of DWORDs

 **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


pi40iv Get Input Sub.vi


Get the state of an input sub-unit



 **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

 **input sub number** sub-unit of target to read (unity-based)

 **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



instrument handle out The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None



data pointer to Vilnt32 array to accept result



data



error out The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

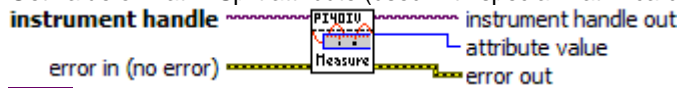


source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

pi40iv Get Matrix Split.vi

Get value of Matrix Split attribute (used with special matrix card supporting this feature)



instrument handle The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None




error in (no error) The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error



displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None


 **attribute value** Value of Matrix Split attribute

 **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

pi40iv Get Next Coercion Record.vi

This function returns the coercion information associated with the IVI session. This function retrieves and clears the oldest instance in which the instrument driver coerced a value you specified to another value.

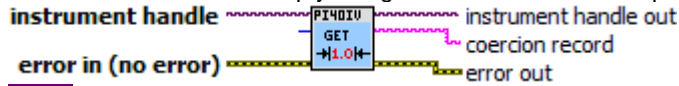
If you set the PI40IV_ATTR_RECORD_COERCIONS attribute to VI_TRUE, the instrument driver keeps a list of all coercions it makes on ViInt32 or ViReal64 values you pass to instrument driver functions. You use this function to retrieve information from that list.

If the next coercion record string, including the terminating NUL byte, contains more bytes than you indicate in this parameter, the function copies Buffer Size - 1 bytes into the buffer, places an ASCII NUL byte at the end of the buffer, and returns the buffer size you must pass to get the entire value. For example, if the value is "123456" and the Buffer Size is 4, the function places "123" into the buffer and returns 7.

If you pass a negative number, the function copies the value to the buffer regardless of the number of bytes in the value.

If you pass 0, you can pass VI_NULL for the Coercion Record buffer parameter.

The function returns an empty string in the Coercion Record parameter if no coercion records remain for the session.



instrument handle The ViSession handle that you obtain from the pi40iv_init function. The handle identifies a particular instrument session.

Default Value: None

buffer size Maximum length of coercion record. This must be at least 256.

error in (no error) The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

instrument handle out The ViSession handle that you obtain from the pi40iv_init function. The handle identifies a particular instrument session.

Default Value: None

coercion record Returns the next coercion record for the IVI session. If there are no coercion records, the function returns an empty string.

error out The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

source The **source** string describes the origin of the error or warning.



The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

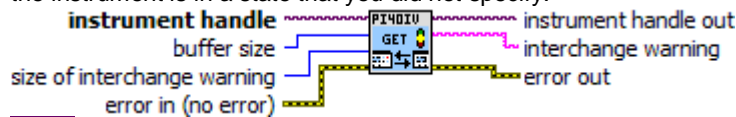
pi40iv Get Next Interchange Warning.vi

This function returns the interchangeability warnings associated with the IVI session. It retrieves and clears the oldest instance in which the class driver recorded an interchangeability warning. Interchangeability warnings indicate that using your application with a different instrument might cause different behavior. You use this function to retrieve interchangeability warnings.

The driver performs interchangeability checking when the @REPLACE[MacroPrefix]_ATTR_INTERCHANGE_CHECK attribute is set to VI_TRUE.

The function returns an empty string in the Interchange Warning parameter if no interchangeability warnings remain for the session.

In general, the instrument driver generates interchangeability warnings when an attribute that affects the behavior of the instrument is in a state that you did not specify.



I70 **instrument handle** The ViSession handle that you obtain from the as701x_init or as701x_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

I32 **buffer size** Pass the number of bytes in the ViChar array you specify for the Interchange Warning parameter.

If the next interchangeability warning string, including the terminating NUL byte, contains more bytes than you indicate in this parameter, the function copies Buffer Size - 1 bytes into the buffer, places an ASCII NUL byte at the end of the buffer, and returns the buffer size you must pass to get the entire value. For example, if the value is "123456" and the Buffer Size is 4, the function places "123" into the buffer and returns 7.

If you pass a negative number, the function copies the value to the buffer regardless of the number of bytes in the value.

If you pass 0, you can pass VI_NULL for the Interchange Warning buffer parameter.

Default Value: None

U32 **size of interchange warning**

TF **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

TF **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I32 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



abc **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I/O **instrument handle out** The ViSession handle that you obtain from the as701x_init or as701x_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

abc **interchange warning** Returns the next interchange warning for the IVI session. If there are no interchange warnings, the function returns an empty string.

The buffer must contain at least as many elements as the value you specify with the Buffer Size parameter. If the next interchangeability warning string, including the terminating NUL byte, contains more bytes than you indicate with the Buffer Size parameter, the function copies Buffer Size - 1 bytes into the buffer, places an ASCII NUL byte at the end of the buffer, and returns the buffer size you must pass to get the entire value. For example, if the value is "123456" and the Buffer Size is 4, the function places "123" into the buffer and returns 7.

This parameter returns an empty string if no interchangeability warnings remain for the session.

err **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

TF **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I32 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

abc **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

pi40iv Get Number of Input Subs.vi

Get number of input subunits on Pickering card



I/O **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

err **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

TF **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no



error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None


 **number of input subs** pointer to variable to receive input sub-unit count

 **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

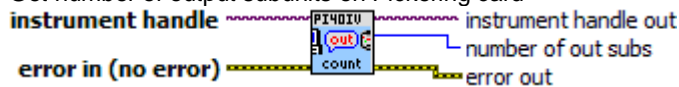
The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


pi40iv Get Number of Output Subs.vi

Get number of output subunits on Pickering card



 **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.


Default Value: None

 **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None


 **number of out subs** pointer to variable to receive output sub-unit count

 **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


pi40iv Get Output Bit.vi

Get the state of an individual output bit




 **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

 **output sub number** sub-unit of target to access (unity-based)

 **bit number** output bit number (unity-based)

 **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.



The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

TF **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I32 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

abc **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I/O **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

TF **state** State of bit in output subunit.

err **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

TF **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I32 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

abc **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

pi40iv Get Output Size Bits.vi

Get number of bits in selected output subunit of Pickering card



I/O **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

I32 **output sub number** sub-unit of target to read (unity-based)

err **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors



from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

TF **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I32 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

abc **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I/O **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

I32 **size** Number of bits in output subunit

IO **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

TF **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I32 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

abc **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

pi40iv Get Output Size Dwords.vi

Get number of DWORDs that need to be allocated to work with array functions on this subunit



I/O **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

U32 **output sub number** sub-unit of target (unity-based)



error in (no error) The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



instrument handle out The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None



size Number of DWORDs



error out The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

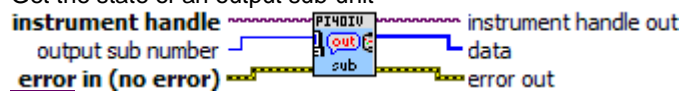


source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

pi40iv Get Output Sub.vi

Get the state of an output sub-unit



instrument handle The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

pickering

U32 **output sub number** sub-unit of target to access (unity-based)

Err **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

TF **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I32 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

abc **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I/O **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

I32 **data** pointer to Vilnt32 array to accept result

I32 **data**

Err **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

TF **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I32 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

abc **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

pi40iv Get Path.vi

In some cases there is more than one possible path between two channels. The driver or the instrument selects the path when you connect two channels with the pi40iv_Connect function. Thus, you cannot guarantee that every call to the pi40iv_Connect function establishes exactly the same path when you pass the same channels. This function returns a string that uniquely identifies the path you create with the pi40iv_Connect function. You can pass this string to the pi40iv_SetPath function to establish the exact same path in the future.

Note:

- (1) This function returns only those paths that you explicitly create by calling pi40iv_Connect and pi40iv_SetPath functions. For example, if you connect channels CH1 and CH3, and then channels CH2 and CH3, the explicit path between channels CH1 and Ch2 does not exist and this function returns an error.



error in (no error) **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

channel 1 You identify a path with two channels. Pass one of the channel names for which you want to obtain a path. Pass the other channel name as the Channel 2 parameter.

Valid channel names depend on type of card used.

Default Value: ""

channel 2 You identify a path with two channels. Pass one of the channel names for which you want to obtain a path. Pass the other channel name as the Channel 1 parameter.

Valid channel names depend on type of card used.

Default Value: ""

buffer size Pass the number of bytes in the ViChar array you specify for the Path List parameter.

error in (no error) The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

instrument handle out The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

path The comma-separated path between channels you specify in the Channel1 and Channel2



parameters.



error out The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

pi40iv Get Resistance.vi

obtain the set resistance value



instrument handle The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None



output sub number sub-unit of target to access (unity-based)



error in (no error) The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



instrument handle out The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None



DBL **resistance** pointer to variable to receive the resistance value

ERR **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

TF **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I32 **code** The **code** input identifies the error or warning.

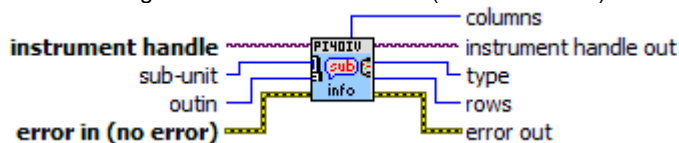
The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

abc **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

pi40iv Get Sub Info.vi

Get Pickering card sub-unit information (numeric format)



I/O **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

I32 **sub-unit** sub-unit of target to access (unity-based)

I16 **outin** 1 for output subunit
0 for input subunit

ERR **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

TF **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


I32 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

abc **source** The **source** string describes the origin of the error or warning.





The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None


 **type** pointer to variable to receive type code result

 **rows** pointer to variable to receive row dimension result


 **columns** pointer to variable to receive column dimension result

 **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

pi40iv Initialize With Options.vi

This function performs the following initialization actions:

- Creates a new IVI instrument driver and optionally sets the initial state of the following session attributes:

```
PI40IV_ATTR_RANGE_CHECK  
PI40IV_ATTR_QUERY_INSTR_STATUS  
PI40IV_ATTR_CACHE  
PI40IV_ATTR_SIMULATE  
PI40IV_ATTR_RECORD_COERCIONS
```

- Opens a session to the specified device using the interface and address you specify for the Resource Name parameter.

- If the ID Query parameter is set to VI_TRUE, this function queries the instrument ID and checks that it is valid for this instrument driver.

- If the Reset parameter is set to VI_TRUE, this function resets the instrument to a known state.

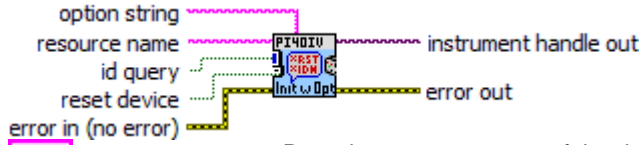
- Sends initialization commands to set the instrument to the state necessary for the operation of the instrument driver.

- Returns a ViSession handle that you use to identify the instrument in all subsequent instrument driver function calls.

Note: This function creates a new session each time you invoke it. Although you can open more than one IVI session for the same resource, it is best not to do so. You can use the same session in multiple program threads. You can



use the pi40iv_LockSession and pi40iv_UnlockSession functions to protect sections of code that require exclusive access to the resource.



resource name Pass the resource name of the device to initialize.

You can also pass the name of a virtual instrument or logical name that you configure with the IVI Configuration utility. The virtual instrument identifies a specific device and specifies the initial settings for the session. A logical Name identifies a particular virtual instrument.

Refer to the following table below for the exact grammar to use for this parameter. Optional fields are shown in square brackets ([]).

Syntax

```

<LogicalName>
PXI<bus>::<device>::INSTR
TCPIP[board]::<hostname or IP address>::<bus>.<device>::INSTR
GPIB[board]::<primary address>[::secondary address]::INSTR
VXI[board]::<logical address>::INSTR
GPIB-VXI[board]::<logical address>::INSTR
ASRL<port>::INSTR
[VInstr->]<VirtualInstrument>
  
```

If you do not specify a value for an optional field, the following values are used:

Optional Field - Value

```

board - 0
secondary address - none (31)
  
```

The following table contains example valid values for this parameter.

"Valid Value" - Description

```

"GPIB::22::INSTR" - GPIB board 0, primary address 22 no
                    secondary address
"GPIB::22::5::INSTR" - GPIB board 0, primary address 22
                    secondary address 5
"GPIB1::22::5::INSTR" - GPIB board 1, primary address 22
                    secondary address 5
"VXI::64::INSTR" - VXI board 0, logical address 64
"VXI1::64::INSTR" - VXI board 1, logical address 64
"GPIB-VXI::64::INSTR" - GPIB-VXI board 0, logical address 64
"GPIB-VXI1::64::INSTR" - GPIB-VXI board 1, logical address 64
"ASRL2::INSTR" - COM port 2
"SampleInstr" - Logical name "SampleInstr"
"VInstr->xyz432" - Virtual Instrument "xyz432"
"xyz432" - Logical Name or Virtual Instrument "xyz432"
  
```

Default Value: "PXI1::14::INSTR"

Note: You specify the resource name with the "VInstr->" if you have the logical name that is the same as the virtual instrument name and you want to explicitly use the virtual instrument name. Otherwise, the driver uses the logical name.

id query Specify whether you want the instrument driver to perform an ID Query.

Valid Range:

```

VI_TRUE (1) - Perform ID Query (Default Value)
VI_FALSE (0) - Skip ID Query
  
```



When you set this parameter to VI_TRUE, the driver verifies that the instrument you initialize is a type that this driver supports.

Circumstances can arise where it is undesirable to send an ID Query command string to the instrument. When you set this parameter to VI_FALSE, the function initializes the instrument without performing an ID Query.



reset device Specify whether you want the to reset the instrument during the initialization procedure.

Valid Range:

VI_TRUE (1) - Reset Device (Default Value)

VI_FALSE (0) - Don't Reset



option string You can use this control to set the initial value of certain attributes for the session. The following table lists the attributes and the name you use in this parameter to identify the attribute.

Name	Attribute Defined Constant	-----
RangeCheck	PI40IV_ATTR_RANGE_CHECK	
QueryInstrStatus	PI40IV_ATTR_QUERY_INSTR_STATUS	
Cache	PI40IV_ATTR_CACHE	
Simulate	PI40IV_ATTR_SIMULATE	
RecordCoercions	PI40IV_ATTR_RECORD_COERCIONS	

The format of this string is, "AttributeName=Value" where AttributeName is the name of the attribute and Value is the value to which the attribute will be set. To set multiple attributes, separate their assignments with a comma.

If you pass NULL or an empty string for this parameter and a VISA resource descriptor for the Resource Name parameter, the session uses the default values for the attributes. The default values for the attributes are shown below:

Attribute Name	Default Value
-----	-----
RangeCheck	VI_TRUE
QueryInstrStatus	VI_TRUE
Cache	VI_TRUE
Simulate	VI_FALSE
RecordCoercions	VI_FALSE

If you pass NULL or an empty string for this parameter and a virtual instrument or logical name for the Resource Name parameter, the session uses the values that you configure for virtual instrument or logical name with the IVI Configuration utility.

You can override the values of the attributes by assigning a value explicitly in a string you pass for this parameter. You do not have to specify all of the attributes and may leave any of them out. If you do not specify one of the attributes, its default value or the value that you configure with the IVI Configuration utility will be used.

The following are the valid values for ViBoolean attributes:

True: 1, TRUE, or VI_TRUE

False: 0, False, or VI_FALSE

Default Value:

"Simulate=0,RangeCheck=1,QueryInstrStatus=1,Cache=1"

At the end of attribute state model of card in DriverSetup section:



error in (no error) The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.



The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



instrument handle out Returns a ViSession handle that you use to identify the instrument in all subsequent instrument driver function calls.

Notes:

(1) This function creates a new session each time you invoke it. This is useful if you have multiple physical instances of the same type of instrument.

(2) Avoid creating multiple concurrent sessions to the same physical instrument. Although you can create more than one IVI session for the same resource, it is best not to do so. A better approach is to use the same IVI session in multiple execution threads. You can use functions pi40iv_LockSession and pi40iv_UnlockSession to protect sections of code that require exclusive access to the resource.



error out The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

pi40iv Initialize.vi

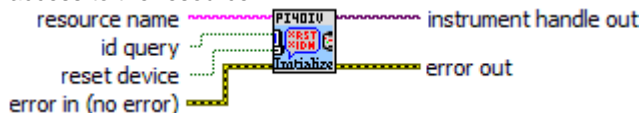
This function performs the following initialization actions:

- Creates a new IVI instrument driver session.
- Opens a session to the specified device using the interface and address you specify for the Resource Name parameter.



- If the ID Query parameter is set to VI_TRUE, this function queries the instrument ID and checks that it is valid for this instrument driver.
- If the Reset parameter is set to VI_TRUE, this function resets the instrument to a known state.
- Sends initialization commands to set the instrument to the state necessary for the operation of the instrument driver.
- Returns a ViSession handle that you use to identify the instrument in all subsequent instrument driver function calls.

Note: This function creates a new session each time you invoke it. Although you can open more than one IVI session for the same resource, it is best not to do so. You can use the same session in multiple program threads. You can use the pi40iv_LockSession and pi40iv_UnlockSession functions to protect sections of code that require exclusive access to the resource.



resource name Pass the resource name of the device to initialize.

You can also pass the name of a virtual instrument or logical name that you configure with the IVI Configuration utility. The virtual instrument identifies a specific device and specifies the initial settings for the session. A logical Name identifies a particular virtual instrument.

Refer to the following table below for the exact grammar to use for this parameter. Optional fields are shown in square brackets ([]).

Syntax

```

-----
GPIB[board]:<primary address>[::secondary address]:INSTR
VXI[board]:<logical address>:INSTR
GPIB-VXI[board]:<logical address>:INSTR
ASRL<port>:INSTR
<LogicalName>
[VInstr-><VirtualInstrument>

```

If you do not specify a value for an optional field, the following values are used:

Optional Field - Value

```

-----
board - 0
secondary address - none (31)

```

The following table contains example valid values for this parameter.

"Valid Value" - Description

```

-----
"GPIB::22::INSTR" - GPIB board 0, primary address 22 no
                    secondary address
"GPIB::22::5::INSTR" - GPIB board 0, primary address 22
                    secondary address 5
"GPIB1::22::5::INSTR" - GPIB board 1, primary address 22
                    secondary address 5
"VXI::64::INSTR" - VXI board 0, logical address 64
"VXI1::64::INSTR" - VXI board 1, logical address 64
"GPIB-VXI::64::INSTR" - GPIB-VXI board 0, logical address 64
"GPIB-VXI1::64::INSTR" - GPIB-VXI board 1, logical address 64
"ASRL2::INSTR" - COM port 2
"SampleInstr" - Logical name "SampleInstr"
"VInstr->xyz432" - Virtual Instrument "xyz432"
"xyz432" - Logical Name or Virtual Instrument "xyz432"

```

/*=CHANGE:=====*

Modify the following default value so that it reflects the default address for your instrument. You

must make the corresponding change to the Default Value entry for the control.

```
*=====END=CHANGE=*/
Default Value: "VXI::14::INSTR"
```

Note: You specify the resource name with the "VInstr->" if you have the logical name that is the same as the virtual instrument name and you want to explicitly use the virtual instrument name. Otherwise, the driver uses the logical name.

TF **id query** Specify whether you want the instrument driver to perform an ID Query.

Valid Range:
 VI_TRUE (1) - Perform ID Query (Default Value)
 VI_FALSE (0) - Skip ID Query

When you set this parameter to VI_TRUE, the driver verifies that the instrument you initialize is a type that this driver supports.

Circumstances can arise where it is undesirable to send an ID Query command string to the instrument. When you set this parameter to VI_FALSE, the function initializes the instrument without performing an ID Query.

TF **reset device** Specify whether you want the to reset the instrument during the initialization procedure.

Valid Range:
 VI_TRUE (1) - Reset Device (Default Value)
 VI_FALSE (0) - Don't Reset

FF **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

TF **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I32 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

abc **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I/O **instrument handle out** Returns a ViSession handle that you use to identify the instrument in all subsequent instrument driver function calls.

Notes:

(1) This function creates a new session each time you invoke it. This is useful if you have multiple physical instances of the same type of instrument.

(2) Avoid creating multiple concurrent sessions to the same physical instrument. Although you can create more than one I/O session for the same resource, it is best not to do so. A better approach is to use the same I/O session in multiple execution threads. You can use functions pi40iv_LockSession and pi40iv_UnlockSession to protect sections of code that require exclusive



access to the resource.



error out The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

pi40iv Invalidate All Attributes.vi

This function invalidates the cached values of all attributes for the session.

instrument handle  **instrument handle out**

error in (no error)  **error out**



instrument handle The ViSession handle that you obtain from the as701x_init or as701x_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None



error in (no error) The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



instrument handle out The ViSession handle that you obtain from the as701x_init or as701x_InitWithOptions function. The handle identifies a particular instrument session.


Default Value: None




error out The **error out** cluster passes error or warning information out of a VI to be used by other

VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

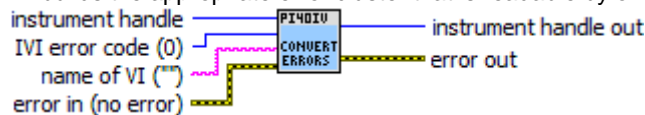
The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


pi40iv IVI Error Converter.vi

This VI converts error codes from IVI instrument drivers to standard LabVIEW error codes. If an error is detected the VI builds the appropriate error cluster that is readable by one of the error handlers supplied with LabVIEW.




 **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **code** The **code** input identifies the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **IVI error code (0)** Error code returned from an IVI instrument driver operation.


 **name of VI (\"")** The name of the VI or function that produced the error.

 **instrument handle** The instrument handle that you obtain from the Initialize or Initialize With Options VIs. The handle identifies a particular instrument session.


Default Value: None

 **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.

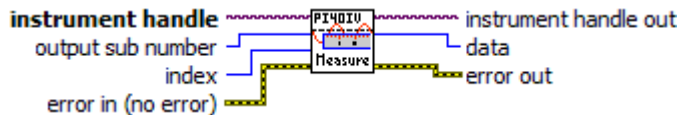
The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **instrument handle out** The instrument handle that you obtain from the Initialize or Initialize With Options VIs. The handle identifies a particular instrument session.

Default Value: None


pi40iv Read Calibration.vi


read a calibration value from EEPROM




 **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

 **output sub number** sub-unit of target to access (unity-based)


 **index** calibration value index number (unity-based)

 **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None


 **data** pointer to variable to receive result

 **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

pi40iv Reset Interchange Check.vi


When developing a complex test system that consists of multiple test modules, it is generally a good idea to design the test modules so that they can run in any order. To do so requires ensuring that each test module completely configures the state of each instrument it uses. If a particular test module does not completely configure the state of an instrument, the state of the instrument depends on the configuration from a previously executed test module. If you execute the test modules in a different order, the behavior of the instrument and therefore the entire test module is likely to change. This change in behavior is generally instrument specific and represents an interchangeability problem.

You can use this function to test for such cases. After you call this function, the interchangeability checking algorithms in the specific driver ignore all previous configuration operations. By calling this function at the beginning of a test module, you can determine whether the test module has dependencies on the operation of previously executed test modules.


This function does not clear the interchangeability warnings from the list of previously recorded interchangeability warnings. If you want to guarantee that the pi40iv_GetNextInterchangeWarning function only returns those interchangeability warnings that are generated after calling this function, you must clear the list of interchangeability warnings. You can clear the interchangeability warnings list by repeatedly calling the pi40iv_GetNextInterchangeWarning function until no more interchangeability warnings are returned. If you are not interested in the content of those warnings, you can call the pi40iv_ClearInterchangeWarnings function.

instrument handle  **instrument handle out**

error in (no error)  **error out**


 **instrument handle** The ViSession handle that you obtain from the as701x_init or as701x_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None


 **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error

displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **instrument handle out** The ViSession handle that you obtain from the as701x_init or as701x_InitWithOptions function. The handle identifies a particular instrument session.


Default Value: None

 **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

pi40iv Reset With Defaults.vi


This function resets the instrument and applies initial user specified settings from the Logical Name which was used to initialize the session. If the session was created without a Logical Name, this function is equivalent to the pi40iv_reset function.

instrument handle  **instrument handle out**


error in (no error)  **error out**

 **instrument handle** The ViSession handle that you obtain from the as701x_init or as701x_InitWithOptions function. The handle identifies a particular instrument session.


Default Value: None

 **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **instrument handle out** The ViSession handle that you obtain from the as701x_init or as701x_InitWithOptions function. The handle identifies a particular instrument session.


Default Value: None

 **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

pi40iv Reset.vi


This function resets the instrument to a known state and sends initialization commands to the instrument. The initialization commands set instrument settings such as Headers Off, Short Command form, and Data Transfer Binary to the state necessary for the operation of the instrument driver.

instrument handle  **instrument handle out**

error in (no error)  **error out**


 **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None


 **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

pickering

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.


Default Value: None

 **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


pi40iv Revision Query.vi


This function returns the revision numbers of the instrument driver and instrument firmware.




 **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.


Default Value: None

 **size of instrument driver revision** Maximum length of driver revision. This must be at least 256.


 **size of firmware revision** Maximum length of firmware revision. This must be at least 256.

 **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **source** The **source** string describes the origin of the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.


Default Value: None

 **instrument driver revision** Returns the instrument driver software revision numbers in the form of a string.


 **firmware revision** Returns the instrument firmware revision numbers in the form of a string.

 **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

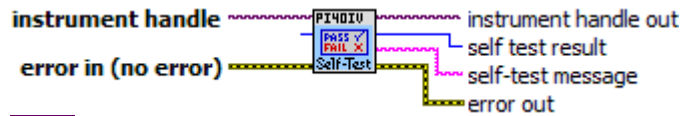
The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


pi40iv Self-Test.vi


This function runs the instrument's self test routine and returns the test result(s).




 **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None


 **size of self-test message** Maximum length of self-test message. This must be at least 256.

 **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None


 **self test result** This control contains the value returned from the instrument self test. Zero means success. For any other code, see the device's operator's manual.

Self-Test Code	Description
0	Passed self test
1	Self test failed


 **self-test message** Returns the self-test response string from the instrument. See the device's operation manual for an explanation of the string's contents.

 **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

pi40iv Set Attribute ViBoolean.vi

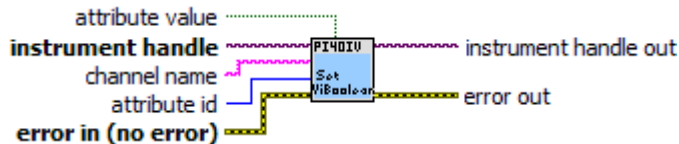
This function sets the value of a ViBoolean attribute.

This is a low-level function that you can use to set the values of instrument-specific attributes and inherent IVI attributes. If the attribute represents an instrument state, this function performs instrument I/O in the following cases:

- State caching is disabled for the entire session or for the particular attribute.
- State caching is enabled and the currently cached value is invalid or is different than the value you specify.

This instrument driver contains high-level functions that set most of the instrument attributes. It is best to use the high-level driver functions as much as possible. They handle order dependencies and multithread locking for you. In addition, they perform status checking only after setting all of the attributes. In contrast, when you set multiple attributes using the SetAttribute functions, the functions check the instrument status after each call.

Also, when state caching is enabled, the high-level functions that configure multiple attributes perform instrument I/O only for the attributes whose value you change. Thus, you can safely call the high-level functions without the penalty of redundant instrument I/O.



channel name If the attribute is channel-based, this parameter specifies the name of the channel on which to set the value of the attribute. If the attribute is not channel-based, then pass VI_NULL or an empty string.

Valid channel name depends on type of card used.

Default Value: ""

U32 **attribute id** Pass the ID of an attribute.

Most used attributes:
 1250001 - PI40IV_ATTR_IS_SOURCE_CHANNEL
 1250003 - PI40IV_ATTR_IS_CONFIGURATION_CHANNEL

TF **attribute value** Pass the value to which you want to set the attribute.

Default Value: False

Err **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

TF **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I32 **code** The **code** input identifies the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

abc **source** The **source** string describes the origin of the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.


Default Value: None

 **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

pi40iv Set Attribute Vilnt32.vi

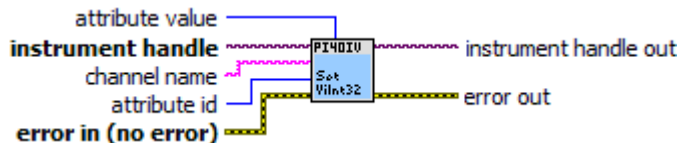
This function sets the value of a Vilnt32 attribute.


This is a low-level function that you can use to set the values of instrument-specific attributes and inherent IVI attributes. If the attribute represents an instrument state, this function performs instrument I/O in the following cases:

- State caching is disabled for the entire session or for the particular attribute.
- State caching is enabled and the currently cached value is invalid or is different than the value you specify.

This instrument driver contains high-level functions that set most of the instrument attributes. It is best to use the high-level driver functions as much as possible. They handle order dependencies and multithread locking for you. In addition, they perform status checking only after setting all of the attributes. In contrast, when you set multiple attributes using the SetAttribute functions, the functions check the instrument status after each call.


Also, when state caching is enabled, the high-level functions that configure multiple attributes perform instrument I/O only for the attributes whose value you change. Thus, you can safely call the high-level functions without the penalty of redundant instrument I/O.




 **channel name** You identify a path with two channels. Pass one of the channel names for which you want to obtain a path. Pass the other channel name as the Channel 1 parameter.


Valid channel names depend on type of card used.

Default Value: ""


 **attribute id** Pass the ID of an attribute.

 **attribute value** Pass the value to which you want to set the attribute.


Default Value: 0

 **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.


Default Value: None

 **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

pi40iv Set Attribute ViReal64.vi



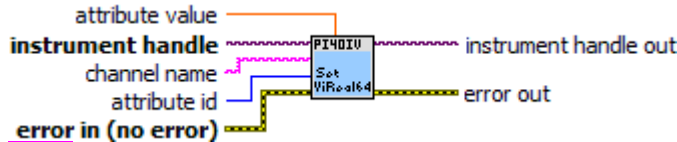
This function sets the value of a ViReal64 attribute.

This is a low-level function that you can use to set the values of instrument-specific attributes and inherent IVI attributes. If the attribute represents an instrument state, this function performs instrument I/O in the following cases:

- State caching is disabled for the entire session or for the particular attribute.
- State caching is enabled and the currently cached value is invalid or is different than the value you specify.

This instrument driver contains high-level functions that set most of the instrument attributes. It is best to use the high-level driver functions as much as possible. They handle order dependencies and multithread locking for you. In addition, they perform status checking only after setting all of the attributes. In contrast, when you set multiple attributes using the SetAttribute functions, the functions check the instrument status after each call.

Also, when state caching is enabled, the high-level functions that configure multiple attributes perform instrument I/O only for the attributes whose value you change. Thus, you can safely call the high-level functions without the penalty of redundant instrument I/O.



channel name You identify a path with two channels. Pass one of the channel names for which you want to obtain a path. Pass the other channel name as the Channel 1 parameter.

Valid channel names depend on type of card used.

Default Value: ""

US2 **attribute id** Pass the ID of an attribute.

DBL **attribute value** Pass the value to which you want to set the attribute.

Default Value: 0

FTI **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

TF **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

IS2 **code** The **code** input identifies the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

ABC **source** The **source** string describes the origin of the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I/O **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.


Default Value: None

 **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

pi40iv Set Attribute ViSession.vi

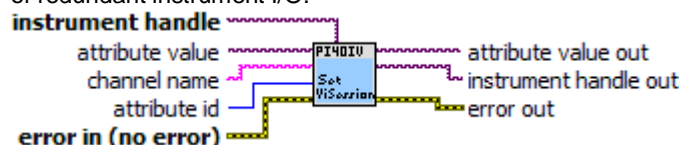
This function sets the value of a ViSession attribute.


This is a low-level function that you can use to set the values of instrument-specific attributes and inherent IVI attributes. If the attribute represents an instrument state, this function performs instrument I/O in the following cases:

- State caching is disabled for the entire session or for the particular attribute.
- State caching is enabled and the currently cached value is invalid or is different than the value you specify.

This instrument driver contains high-level functions that set most of the instrument attributes. It is best to use the high-level driver functions as much as possible. They handle order dependencies and multithread locking for you. In addition, they perform status checking only after setting all of the attributes. In contrast, when you set multiple attributes using the SetAttribute functions, the functions check the instrument status after each call.


Also, when state caching is enabled, the high-level functions that configure multiple attributes perform instrument I/O only for the attributes whose value you change. Thus, you can safely call the high-level functions without the penalty of redundant instrument I/O.




 **channel name** You identify a path with two channels. Pass one of the channel names for which you want to obtain a path. Pass the other channel name as the Channel 1 parameter.

Valid channel names depend on type of card used.


Default Value: ""

 **attribute id** Pass the ID of an attribute.


 **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.



The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.


Default Value: None

 **attribute value** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.


Default Value: None

 **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

 **attribute value out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None



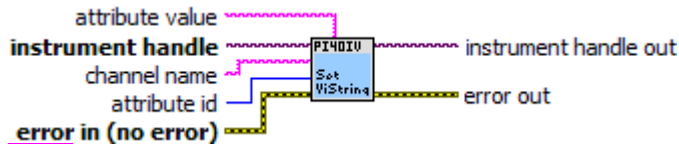
This function sets the value of a ViString attribute.

This is a low-level function that you can use to set the values of instrument-specific attributes and inherent IVI attributes. If the attribute represents an instrument state, this function performs instrument I/O in the following cases:

- State caching is disabled for the entire session or for the particular attribute.
- State caching is enabled and the currently cached value is invalid or is different than the value you specify.

This instrument driver contains high-level functions that set most of the instrument attributes. It is best to use the high-level driver functions as much as possible. They handle order dependencies and multithread locking for you. In addition, they perform status checking only after setting all of the attributes. In contrast, when you set multiple attributes using the SetAttribute functions, the functions check the instrument status after each call.

Also, when state caching is enabled, the high-level functions that configure multiple attributes perform instrument I/O only for the attributes whose value you change. Thus, you can safely call the high-level functions without the penalty of redundant instrument I/O.



channel name You identify a path with two channels. Pass one of the channel names for which you want to obtain a path. Pass the other channel name as the Channel 1 parameter.

Valid channel names depend on type of card used.

Default Value: ""

attribute id Pass the ID of an attribute.

From the function panel window, you can use this control as follows.

- Click on the control or press <ENTER>, <spacebar>, or <ctrl-down arrow>, to display a dialog box containing a hierarchical list of the available attributes. Attributes whose value cannot be set are dim. Help text is shown for each attribute. Select an attribute by double-clicking on it or by selecting it and then pressing <ENTER>.

Read-only attributes appear dim in the list box. If you select a read-only attribute, an error message appears.

A ring control at the top of the dialog box allows you to see all IVI attributes or only the attributes of the ViString type. If you choose to see all IVI attributes, the data types appear to the right of the attribute names in the list box. Attributes with data types other than ViString are dim. If you select an attribute data type that is dim, LabWindows/CVI transfers you to the function panel for the corresponding function that is consistent with the data type.

- If you want to enter a variable name, press <CTRL-T> to change this ring control to a manual input box.
- If the attribute in this ring control has named constants as valid values, you can view the constants by moving to the Attribute Value control and pressing <ENTER>.

attribute value Pass the value to which you want to set the attribute.

error in (no error) The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors



from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

TF **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I32 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

abc **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I/O **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

error out The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

TF **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I32 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

abc **source** The **source** string describes the origin of the error or warning.

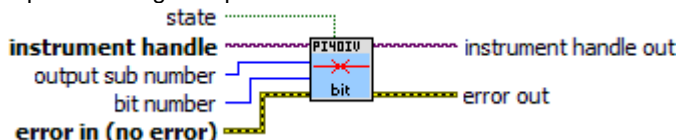
The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

I/O **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

pi40iv Set Output Bit.vi


Operate a single output bit





I/O **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.




Default Value: None


 **output sub number** sub-unit of target to access (unity-based)

 **bit number** output bit number (unity-based)


 **state** TRUE (for ON) or FALSE (for OFF)

 **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.


Default Value: None

 **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

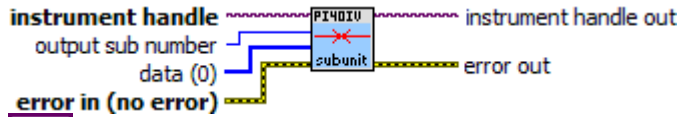
The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

pi40iv Set Output Sub.vi

Write data to an output sub-unit



instrument handle The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

output sub number sub-unit of target to access (unity-based)

data (0) Binary data representing states of all bits in subunit to set

data

error in (no error) The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

instrument handle out The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

error out The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the



error displayed.

pi40iv Set Path.vi

This function connects two channels by establishing the exact path you specify with the pathList parameter.



instrument handle The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

path list Pass the path list for the path you previously created that you want the switch module to establish. You obtain the path list for a path you previously created with the pi40iv_GetPath function.

Example: The path from Ch1 to Ch3 over Conf1 is:

"Ch1->Conf1,Conf1->Ch3"

error in (no error) The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

instrument handle out The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

error out The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the

error displayed.


 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


pi40iv Set Resistance.vi


set resistance as close as possible to the given value




 **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.


Default Value: None

 **output sub number** sub-unit of target to access (unity-based)


 **resistance** the resistance to set

 **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.


Default Value: None

 **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


pi40iv Switch Is Debounced-.vi

This function returns the state of the switch module. It indicates if all the paths that you created have settled.




 **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.


Default Value: None

 **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None

 **is debounced** Indicates the state of the switch module. The driver returns the value of PI40IV_ATTR_IS_DEBOUNCED attribute.

The value VI_TRUE indicates that all the paths that you created have settled.


The value VI_FALSE indicates that all the paths that you created have not settled.

 **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

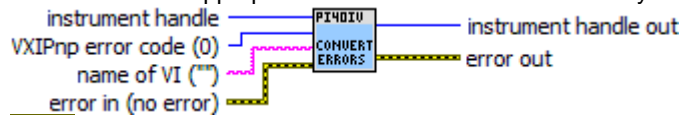
The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


pi40iv VXIPnp Error Converter.vi

This VI converts error codes from VXIPnp instrument driver to standard LabVIEW error codes. If an error is detected the VI builds the appropriate error cluster that is readable by one of the error handlers supplied with LabVIEW.




 **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **code** The **code** input identifies the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **VXIPnp error code (0)** Error code returned from a VXIPnp instrument driver operation.


 **name of VI (*)** The name of the VI or function that produced the error.

 **instrument handle** The instrument handle that you obtain from the Initialize or Initialize With Options VIs. The handle identifies a particular instrument session.


Default Value: None

 **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.

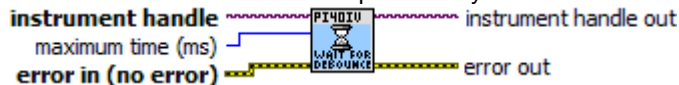
The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **instrument handle out** The instrument handle that you obtain from the Initialize or Initialize With Options VIs. The handle identifies a particular instrument session.

Default Value: None


pi40iv Wait For Debounce.vi

This function returns after all the paths that you create have settled.




 **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None


 **maximum time (ms)** Specifies the maximum length of time for this function to wait until all switches in the switch module debounce. If the time you specify elapses before all switches debounce, this function returns a timeout error.

The units are milliseconds.


Default value: 500 ms

 **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.


The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **instrument handle out** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.


Default Value: None

 **error out** The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

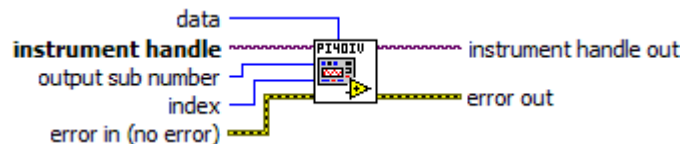
The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.


pi40iv Write Calibration.vi


write a calibration value to EEPROM




 **instrument handle** The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None


 **output sub number** sub-unit of target to access (unity-based)

 **index** calibration value index number (unity-based)


 **data** calibration value to write

 **error in (no error)** The **error in** cluster can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **status** The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **code** The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.

 **source** The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the



error displayed.



instrument handle out The ViSession handle that you obtain from the pi40iv_init or pi40iv_InitWithOptions function. The handle identifies a particular instrument session.

Default Value: None



error out The **error out** cluster passes error or warning information out of a VI to be used by other VIs.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



status The **status** boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



code The **code** input identifies the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.



source The **source** string describes the origin of the error or warning.

The pop-up option **Explain Error** (or Explain Warning) gives more information about the error displayed.