

LabVIEW-UCI Instructions

Jun. 2017

Overview

This document introduces UCI communication interface application based on LabVIEW platform secondary development. LabVIEW applies Library Function Node (CLFN) VI option of the interface, to establish the connection with UCI dynamic link library. Please refer to UCI help files for details of UCI dynamic link library.

Attention

LabVIEW must get the path for UCI dynamic link library application, which is stored in ASCII folder under VI path by default. If the folder cannot be found, build a new one and copy uci.dll to the folder.

Basic VI Illustration

Search the device

☒ **VI name**

GetDevAddress.vi

☒ **VI icon**

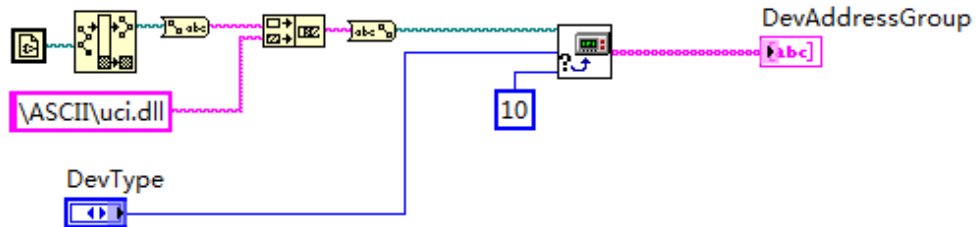


☒ **VI description**

Endpoint type	Name	Description
Input	UCI_DllPath	UCI dynamic library absolute path
	DevType	USB\LAN device
	DevNum	Quantity of device to search

Output	DevAddressGroup	Searched device address collections, presented as a one-dimensional string array
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☒ **Example**



Open the device

☒ **VI name**

Open.vi

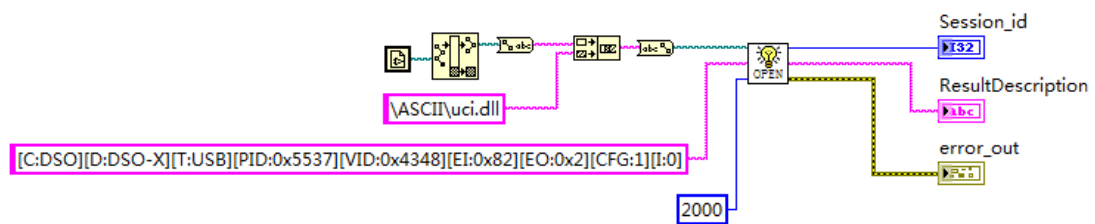
☒ **VI icon**



☒ **VI description**

Endpoint type	Name	Description
Input	UCI_DllPath	UCI dynamic library absolute path
	Address	Address of the device to open
	Timeout	Timeout period, unit: ms
Output	Session_id	Device handle
	ResultDescription	Open device result description
	error_out	CLFN error description

☒ **Example**



Close the device

☒ VI name

Close.vi

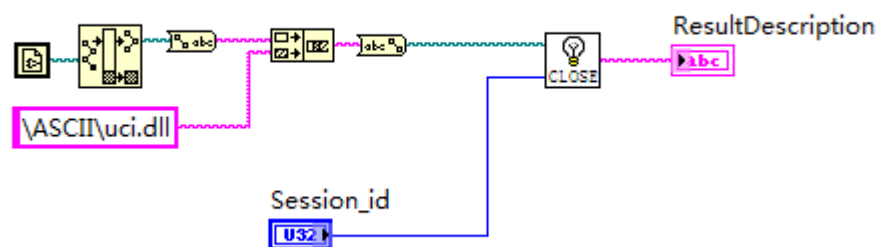
☒ VI icon



☒ VI description

Endpoint type	Name	Description
Input	UCI_DllPath	UCI dynamic library absolute path
	Session_id	Handle of the device opened
Output	ResultDescription	Close device result description

☒ Example



Write operations

☒ VI name

Write.vi

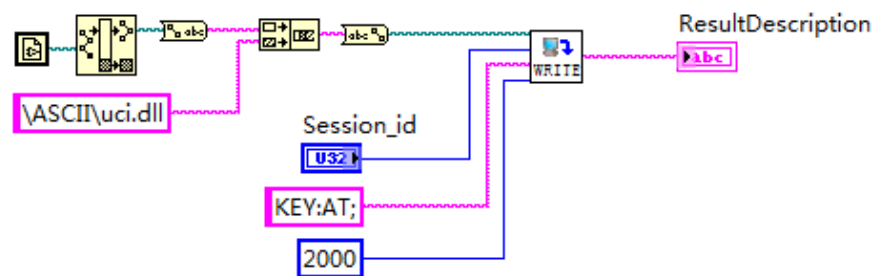
☒ VI icon



☒ VI description

Endpoint type	Name	Description
Input	UCI_DllPath	UCI dynamic library absolute path
	Session_id	Handle of the device opened
	Command	Instruction setting
	Timeout	Timeout period, unit: ms
Output	ResultDescription	Instruction result description setting

☒ Example



Read operations

☒ VI name

Read.vi

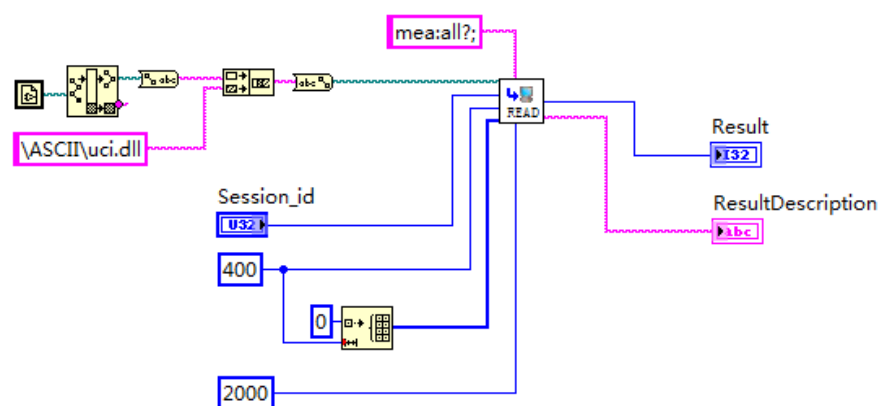
☒ VI icon



☒ VI description

Endpoint type	Name	Description
Input	UCI_DllPath	UCI dynamic library absolute path
	Session_id	Handle of the device opened
	Command	Instruction request
	Timeout	Timeout period, unit: ms
	InputData	One-dimensional string array with the memory space opened up (should apply for memory space)
	Length	Length of one-dimensional string array
Output	OutputData	Data read
	Result	Return value ≥ 0 indicates the length of data read; < 0 indicates the error number
	ResultDescription	Instruction result description reading

☒ Example



Oscilloscope Function VI Illustration

Data analysis

☒ **VI name**

ParamsMeasure.vi

☒ **VI icon**



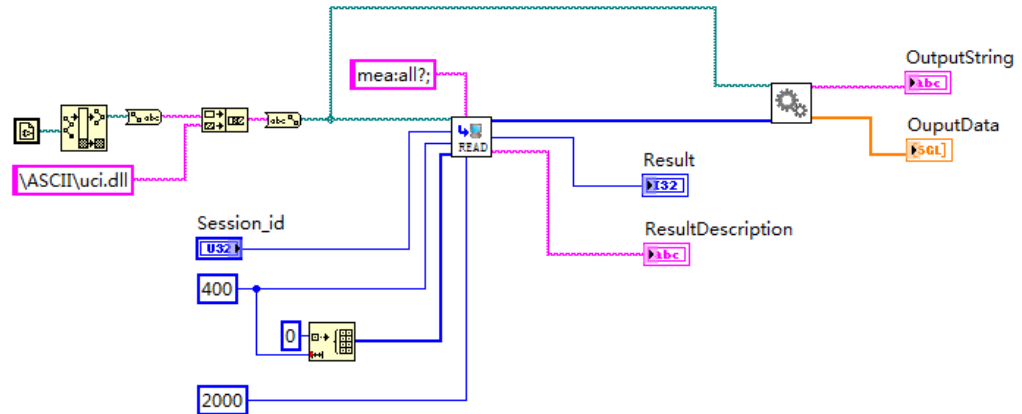
☒ **VI description**

The VI is specially used for measurement data read by mea:all? Instruction.

Please see the example, MeaAll.vi below for the operation.

Endpoint type	Name	Description
Input	UCI_DIIPath	UCI dynamic library absolute path
	InputData	Data to analyze
Output	OuputData	Analysis data (The data is a one-dimensional string array. Every 5 elements represent a measurement value, among which the first element serves as the value and the other four serve as the unit information)
	OutputString	Analyze and match the string array of unit information

☒ Example



Capture waveforms

☒ VI name

CaptureWave.vi

☒ VI icon



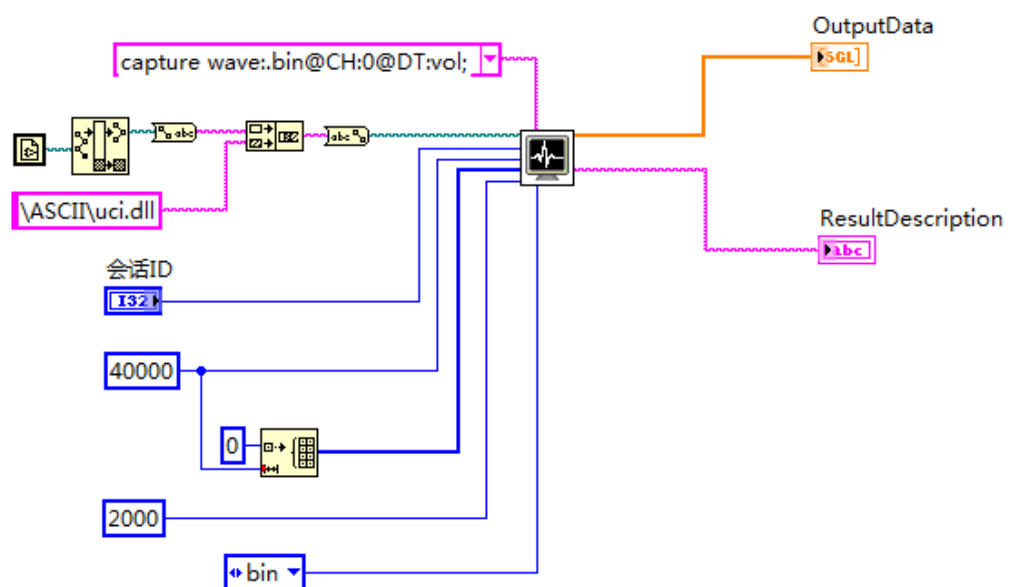
☒ VI description

This VI is specially used for the instructions of capture wave:..bin@CH:[0|1|2|3]@DT:vol and capture wave:..csv@CH:[0|1|2|3]@DT:vol to acquire waveforms and save as .csv format files. Please see CaptureWaveDemo.vi and TestMethod.vi for the operation.

Endpoint type	Name	Description
Input	UCI_DllPath	UCI dynamic library absolute path
	Session_id	Handle of the device opened
	Command	Instruction reading
	InputData	One-dimensional string array with the memory space opened up (should apply for memory space)
	Length	One-dimensional string array length
	Timeout	Timeout period, unit: ms
	ReadType	Byte steam\file reading
Output	OutputData	Output of waveform data read by byte steam mode
	.csv File Path	csv file storage path of the file reading mode
	ResultDescription	Result description of waveform reading

☒ Example

Byte steam reading mode:



File reading mode

