Reporte Proyecto final

Table of Contents

1. Project description
2. Code component descriptions
   2.1. DQMH® modules
      2.1.1. Preamble
      2.1.2. Modules overview
      2.1.3. moduloDqmh.lvlib
   2.2. Libraries
   2.3. Classes
      2.3.1. Serial Device.lvclass
      2.3.2. Arduino.lvclass
      2.3.3. NXP.lvclass
      2.3.4. simulado.lvclass
3. VI descriptions
   3.1. DQMH® modules
      3.1.1. moduloDqmh.lvlib
   3.2. Libraries
   3.3. Classes
      3.3.1. Serial Device.lvclass
      3.3.2. Arduino.lvclass
      3.3.3. NXP.lvclass
      3.3.4. simulado.lvclass
4. Legal Information
   4.1. Document creation
      4.1.1. Antidoc
      4.1.2. Asciidoc for LabVIEW™
      4.1.3. Graph Builder
   4.2. Product used in the project
      4.2.1. DQMH®

1. Project description

No description found (add content in project description)

2. Code component descriptions

2.1. DQMH® modules

This section describes DQMH® module responsibilities and relationships.

2.1.1. Preamble

A DQMH module is the main component of an architecture based on DQMH® framework. A DQMH module is used to implement a section of the application that has one responsibility.

DQMH® framework defines two different type of DQMH module.

Singleton:

A Singleton DQMH module can have only one instance running at any given time.

Cloneable:

A Cloneable DQMH module can have one or multiple instances running in parallel.

DQMH® framework defines two different ways to carry data throughout the application and with both other DQMH modules and non-DQMH based code.

Request events:

A request is a code that fires an event requesting the DQMH module to do something. Multiple locations in the code can send events to the DQMH module.

Request events are many-to-one.

Requests are usually named using imperative tense.

Broadcast events:

A broadcast is a code that fires an event broadcasting that the DQMH module did something. Multiple Event Structures can register to handle the Broadcast Events.

Broadcast Events are one-to-many.

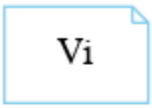
Broadcasts are usually named using past tense or passive voice.

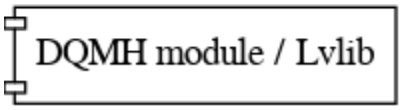
Refer to the DQMH® framework official documentation (http://delacor.com/documentation/dqmh-html/) to find more details on how the framework works

The following section gives you details on the project architecture relying on this framework. It gives you an overview of the modules' interaction and detailed information on each module.

Graphs used in this section have the following legend:

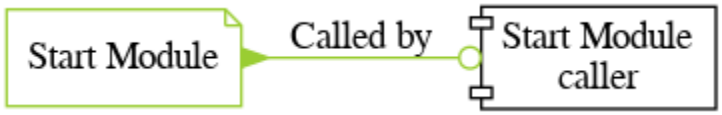
Components:

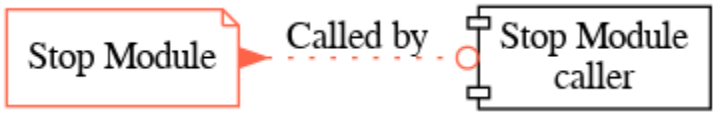




Events:

Start and Stop module callers:





2.1.2. Modules overview

This project contains the following modules.

Table 1. Modules list

Singleton	Cloneable
	moduloDqmh.lvlib

This graph represents the links between all DQMH modules.

2.1.3. moduloDqmh.lvlib

Type: Cloneable

Responsibility: En esta libreria se encuntra todas las carpetas del DQMH, ademas del main o interfaz donde se realiza todas las ejeccuinoes o instrucciones de los microcontroladores. es el punete entre el ususario y el microcontrolador

Module Start/Stop calls

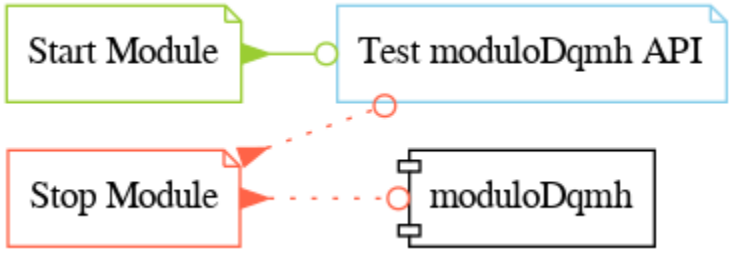


Table 2. Start and Stop module callers

Function	Callers
moduloDqmh.lvlib:Start Module.vi	Test moduloDqmh API.vi
moduloDqmh.lvlib:Stop Module.vi	moduloDqmh.lvlib:Handle Exit.vi Test moduloDqmh API.vi

Module relationship

Table 3. Requests callers

Request Name	Callers
moduloDqmh.lvlib:Show Panel.vi	Test moduloDqmh API.vi
moduloDqmh.lvlib:Hide Panel.vi	Test moduloDqmh API.vi
moduloDqmh.lvlib:Show Diagram.vi	Test moduloDqmh API.vi
moduloDqmh.lvlib:READ ADC.vi	Test moduloDqmh API.vi
moduloDqmh.lvlib:Read Port.vi	Test moduloDqmh API.vi
moduloDqmh.lvlib:Read Pin.vi	Test moduloDqmh API.vi

Request Name	Callers
moduloDqmh.lvlib:Write Port.vi	Test moduloDqmh API.vi
moduloDqmh.lvlib:Write Pin.vi	Test moduloDqmh API.vi

Table 4. Broadcasts Listeners

Broadcast Name	Listeners
moduloDqmh.lvlib:Module Did Init.vi	Test moduloDqmh API.vi
moduloDqmh.lvlib:Status Updated.vi	Test moduloDqmh API.vi
moduloDqmh.lvlib:Error Reported.vi	Test moduloDqmh API.vi
moduloDqmh.lvlib:Module Did Stop.vi	Test moduloDqmh API.vi
moduloDqmh.lvlib:Update Module Execution Status.vi	Test moduloDqmh API.vi

Table 5. Used requests

Module	Brodcasts
—	—

Table 6. Registred broadcast

Module	Brodcasts
—	—

2.2. Libraries

This section describes the libraries contained in the project.

2.3. Classes

This section describes the classes contained in the project.

2.3.1. Serial Device.lvclass

Esta clase es la papa y la principal de todo el HAL. esta vacio porque los hijos son los que hacen las cosas, de cierta manera se reciclan los codigos del papa

2.3.2. Arduino.lvclass

Esta calse contiene todos los overrides de las instrucciones o funciones del arduino. Aqui se encuentran los hijos que realizan tareas especificas.

2.3.3. NXP.lvclass

Esta calse contiene todos los overrides de las instrucciones o funciones del NXP. Aqui se encuentran los hijos que realizan tareas especificas.

2.3.4. simulado.lvclass

Esta calse contiene todos los overrides de las instrucciones o funciones del SIMULADO. Aqui se encuentran los hijos que realizan tareas especificas.

3. VI descriptions

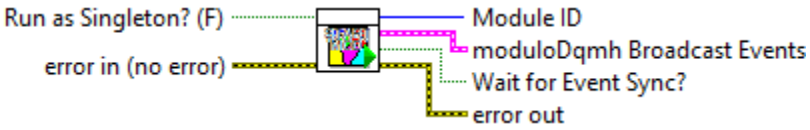
3.1. DQMH® modules

This section describes DQMH® modules events.

3.1.1. moduloDqmh.lvlib

moduloDqmh.lvlib:Start Module.vi

Event type: Not a DQMH Event

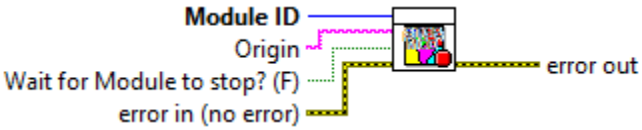


Description:

Launches the Module Main.vi. _____ Based on Delacor QMH Project Template 5.0.0.82.

moduloDqmh.lvlib:Stop Module.vi

Event type: Not a DQMH Event

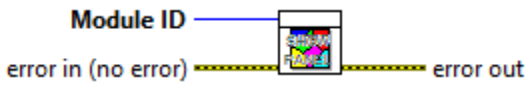


Description:

Send the Stop request to the Module's Main.vi. _____ Based on Delacor QMH Project Template 5.0.0.82.

moduloDqmh.lvlib:Show Panel.vi

Event type: Request

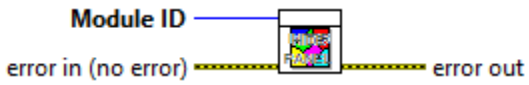


Description:

Send the Show Panel request to the Module's Main.vi. _____ Based on Delacor QMH Project Template 5.0.0.82.

moduloDqmh.lvlib:Hide Panel.vi

Event type: Request



Description:

Send the Hide Panel request to the Module's Main.vi. _____ Based on Delacor QMH Project Template 5.0.0.82.

moduloDqmh.lvlib:Show Diagram.vi

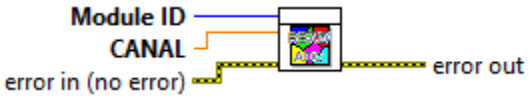
Event type: Request

Description:

This VI tells the Module to show its block diagram to facilitate troubleshooting (add probes, breakpoints, highlight execution, etc). _____ Based on Delacor QMH Project Template 5.0.0.82.

moduloDqmh.lvlib:READ ADC.vi

Event type: Request

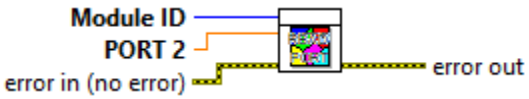


Description:

LECTURA ADC _____ Created using Delacor QMH Event Scripter 5.0.0.112.

moduloDqmh.lvlib:Read Port.vi

Event type: Request

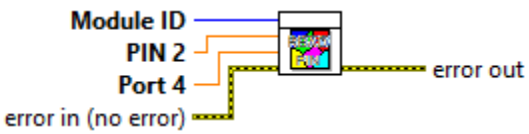


Description:

Read port _____ Created using Delacor QMH Event Scripter 5.0.0.112.

moduloDqmh.lvlib:Read Pin.vi

Event type: Request

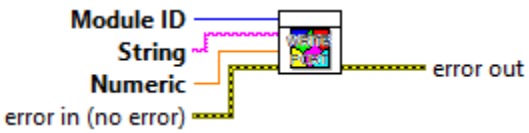


Description:

_____ Created using Delacor QMH Event Scripter 5.0.0.112.

moduloDqmh.lvlib:Write Port.vi

Event type: Request

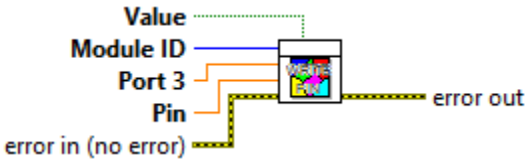


Description:

_____ Created using Delacor QMH Event Scripter 5.0.0.112.

moduloDqmh.lvlib:Write Pin.vi

Event type: Request



Description:

_____ Created using Delacor QMH Event Scripter 5.0.0.112.

moduloDqmh.lvlib:Module Did Init.vi

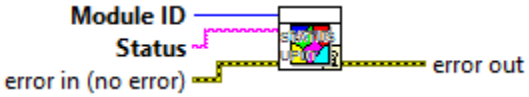
Event type: Broadcast

Description:

Send the Module Did Init event to any VI registered to listen to this module's broadcast events. _____ Based on Delacor QMH Project Template 5.0.0.82.

moduloDqmh.lvlib:Status Updated.vi

Event type: Broadcast

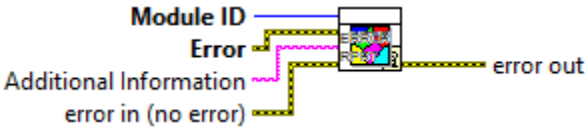


Description:

Send the Status Updated event to any VI registered to listen to events from the owning module. _____ Based on Delacor QMH Project Template 5.0.0.82.

moduloDqmh.lvlib:Error Reported.vi

Event type: Broadcast

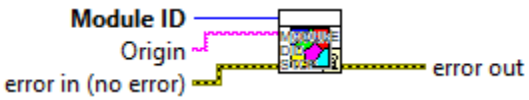


Description:

Send the Error Reported event to any VI registered to listen to events from the owning module. _____ Based on Delacor QMH Project Template 5.0.0.82.

moduloDqmh.lvlib:Module Did Stop.vi

Event type: Broadcast



Description:

Send the Module Did Stop event to any VI registered to listen to this module's broadcast events. _____ Based on Delacor QMH Project Template 5.0.0.82.

moduloDqmh.lvlib:Update Module Execution Status.vi

Event type: Broadcast

Description:

Fire the Get Module Execution Status request. _____ Created using Delacor QMH Event Scripter 3.0.0.12. _____ Based on Delacor QMH Project Template 5.0.0.82.

3.2. Libraries

This section describes libraries public VIs.

3.3. Classes

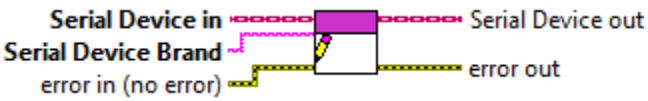
This section describes classes public VIs.

3.3.1. Serial Device.lvclass

Serial Device.lvclass:Read Serial Device Brand.vi

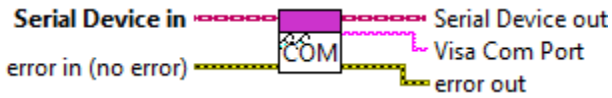
Description: No description found (add content in VI description)

Serial Device.lvclass:Write Serial Device Brand.vi



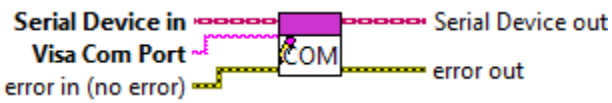
Description: No description found (add content in VI description)

Serial Device.lvclass:Read Visa Com Port.vi



Description: No description found (add content in VI description)

Serial Device.lvclass:Write Visa Com Port.vi



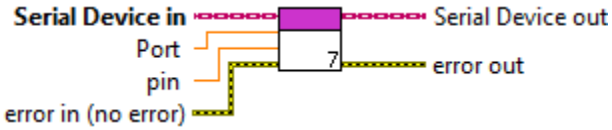
Description: No description found (add content in VI description)

Serial Device.lvclass:Getpinstatusresponse.vi

Description:

Este Vi se encarag de leer del micro los valores del los pines seleccionados. Eventualmente son mostrados en el interfaz

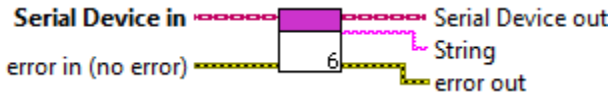
Serial Device.lvclass:GETPINSTATUS.vi



Description:

Get pin status escribe la instruccion en el micro y consecutivamente genera una respuesta

Serial Device.lvclass:reponsegetport.vi



Description:

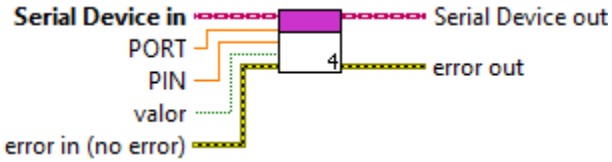
get port response lee la respuesta del microcontrolador seleccionado.

Serial Device.lvclass:GETPORTSTATUS.vi

Description:

GETPORTSTATUS se encarga de mandar la instrucion de obtencion del puerto al microcontrolador

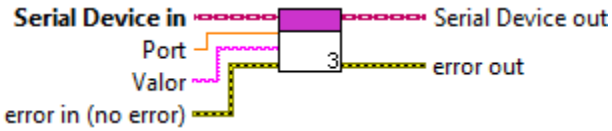
Serial Device.lvclass:SETPINSTATUS.vi



Description:

SETPINSTATUS esta instruccion hace el set de los pines y manda la instruccion al micro

Serial Device.lvclass:SETPORT.vi



Description:

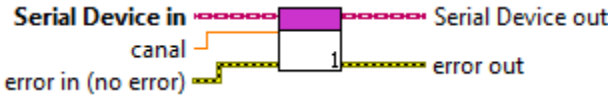
SETPORT este vi Se encarga de setear el port de los micros mandando la instruccion correpsondiente al micron cotrolador

Serial Device.lvclass:respuesta read adc.vi

Description:

Este VI hace la lectura del adc y lo ense&#65533;a en el interfaz

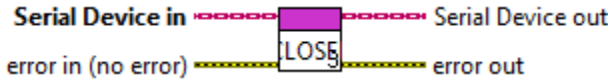
Serial Device.lvclass:Read ADC.vi



Description:

Read adc manda la instruccion de la lectura del adc al microcontrolador en cuestion

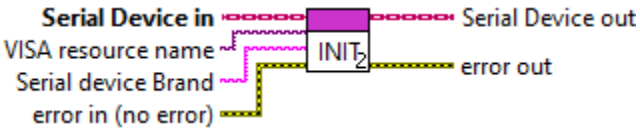
Serial Device.lvclass:visa closed connection.vi



Description:

Ciere de la comunicacion

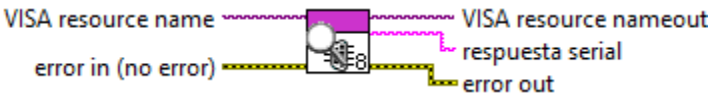
Serial Device.lvclass:initilize.vi



Description:

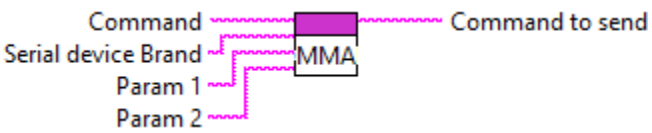
Metodo inicializar Se configura la comunicacion del VISA

Serial Device.lvclass:serial read.vi



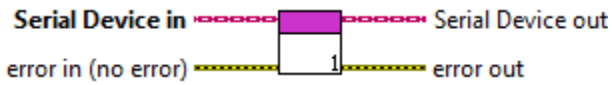
Description: No description found (add content in VI description)

Serial Device.lvclass:comand.vi



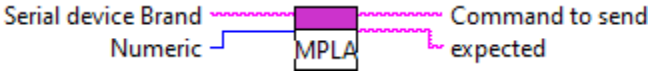
Description: No description found (add content in VI description)

Serial Device.lvclass:Untitled 1.vi



Description: No description found (add content in VI description)

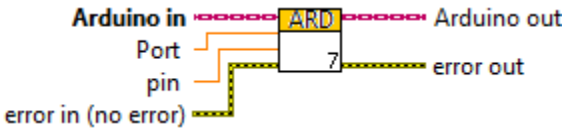
Serial Device.lvclass:commndtamplate.vit



Description: No description found (add content in VI description)

3.3.2. Arduino.lvclass

Arduino.lvclass:GETPINSTATUS.vi



Description: No description found (add content in VI description)

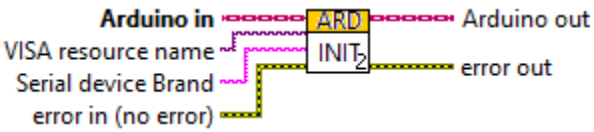
Arduino.lvclass:Getpinstatusresponse.vi

Description: No description found (add content in VI description)

Arduino.lvclass:GETPORTSTATUS.vi

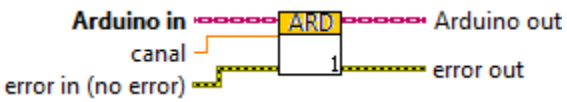
Description: No description found (add content in VI description)

Arduino.lvclass:initilize.vi



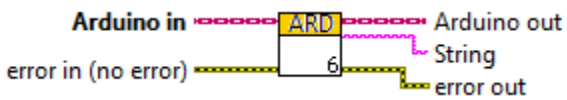
Description: No description found (add content in VI description)

Arduino.lvclass:Read ADC.vi



Description: No description found (add content in VI description)

Arduino.lvclass:reponsegetport.vi

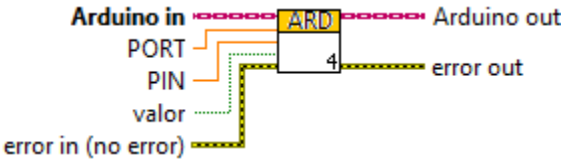


Description: No description found (add content in VI description)

Arduino.lvclass:respuesta read adc.vi

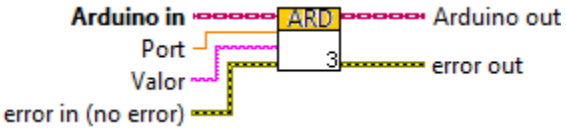
Description: No description found (add content in VI description)

Arduino.lvclass:SETPINSTATUS.vi



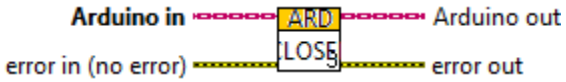
Description: No description found (add content in VI description)

Arduino.lvclass:SETPORT.vi



Description: No description found (add content in VI description)

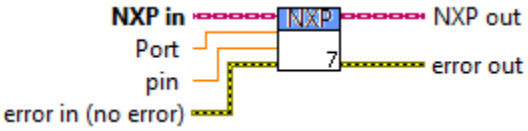
Arduino.lvclass:visa closed connection.vi



Description: No description found (add content in VI description)

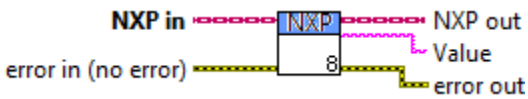
3.3.3. NXP.lvclass

NXP.lvclass:GETPINSTATUS.vi



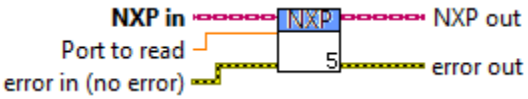
Description: No description found (add content in VI description)

NXP.lvclass:Getpinstatusresponse.vi



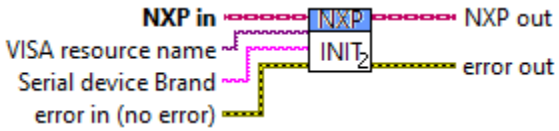
Description: No description found (add content in VI description)

NXP.lvclass:GETPORTSTATUS.vi



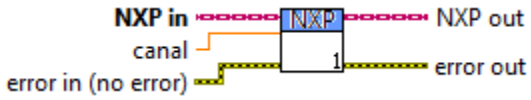
Description: No description found (add content in VI description)

NXP.lvclass:initilize.vi



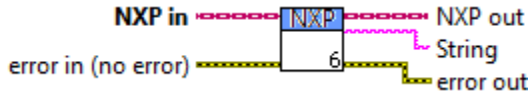
Description: No description found (add content in VI description)

NXP.lvclass:Read ADC.vi



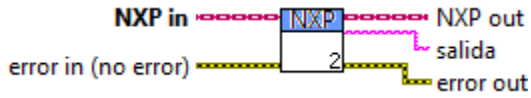
Description: No description found (add content in VI description)

NXP.lvclass:reponsegetport.vi



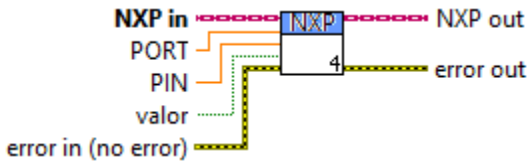
Description: No description found (add content in VI description)

NXP.lvclass:respuesta read adc.vi



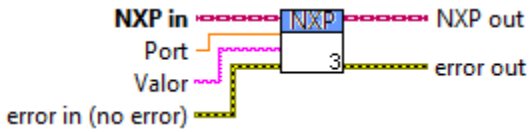
Description: No description found (add content in VI description)

NXP.lvclass:SETPINSTATUS.vi



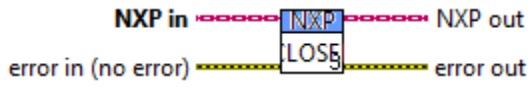
Description: No description found (add content in VI description)

NXP.lvclass:SETPORT.vi



Description: No description found (add content in VI description)

NXP.lvclass:visa closed connection.vi



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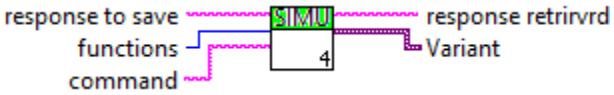
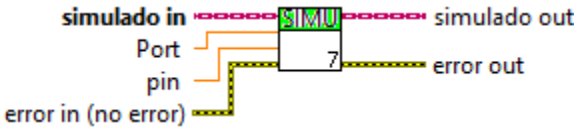
3.3.4. simulado.lvclass

simulado.lvclass:FGV.vi



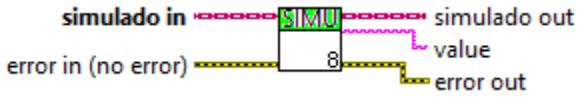
Description: No description found (add content in VI description)

simulado.lvclass:GETPINSTATUS.vi



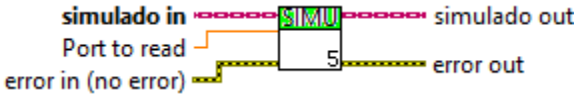
Description: No description found (add content in VI description)

simulado.lvclass:Getpinstatusresponse.vi



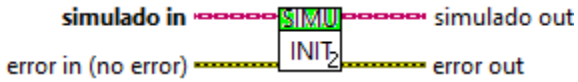
Description: No description found (add content in VI description)

simulado.lvclass:GETPORTSTATUS.vi



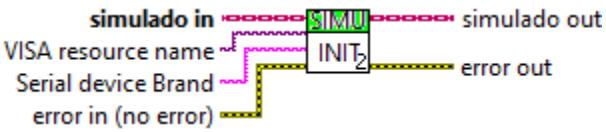
Description: No description found (add content in VI description)

simulado.lvclass:init.vi



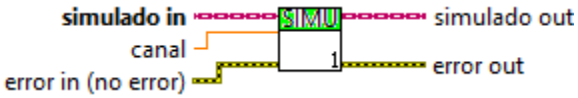
Description: No description found (add content in VI description)

simulado.lvclass:initilize.vi



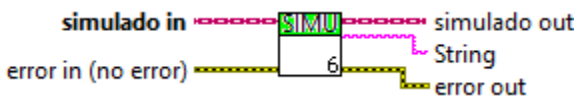
Description: No description found (add content in VI description)

simulado.lvclass:Read ADC.vi



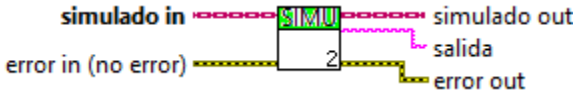
Description: No description found (add content in VI description)

simulado.lvclass:reponsegetport.vi



Description: No description found (add content in VI description)

simulado.lvclass:respuesta read adc.vi



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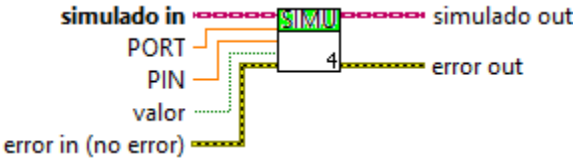
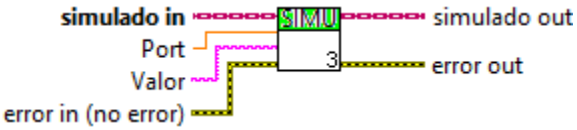
simulado.lvclass:SETPINSTATUS.vi



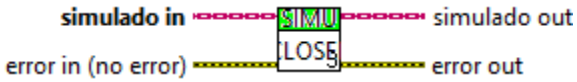
Description: No description found (add content in VI description)

simulado.lvclass:SETPORT.vi



Description: No description found (add content in VI description)

simulado.lvclass:visa closed connection.vi



Description: No description found (add content in VI description)

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4.1. Document creation

This document has been generated using the following tools.

4.1.1. Antidoc

Project website: Antidoc (https://wovalab.gitlab.io/open-source/labview-doc-generator/)

Maintainer website: Wovalab (https://wovalab.com)

4.1.2. Asciidoc for LabVIEW™

Project website: Asciidoc toolkit (https://wovalab.gitlab.io/open-source/asciidoc-toolkit/)

Maintainer website: Wovalab (https://wovalab.com)

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4.1.3. Graph Builder

Project website: Graph Builder (https://gitlab.com/cgambini/graph-builder)

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4.2. Product used in the project

The documented project has been developed with the following products.

4.2.1. DQMH®

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Find more details on Delacor (https://delacor.com/products/dqmh/) website