

MT2 LABVIEW LIBRARY

USER MANUAL

Rel. 02.00.0001



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REVISION HISTORY

Manual revision history

Revision/ Date	Change description	Author
02.00.0000 November, 2015	Rewrite library code, new manual release	Rivolta A.
02.00.0001 August, 2016	Added ISO 9001:20015 logo	Bottaccioli M.

MT2 LabVIEW Library



The **MT2 LabVIEW Library** gives a set of VIs that increase and improve the code development to control any device of the MT2 family products. This packed library is made by two level of VIs: a low level set is dedicated to the communication protocols code and is implemented in the **MT2_LowLevel.lvlib**, while the API set of VIs in the **MT2_Application.lvlib** are developed to improve code implementation with a precompiled set of commands for each device of the MT2 family. The API set is useful for application development while the low level set is indicated for maximize code performances. These libraries are developed in LabVIEW2010.

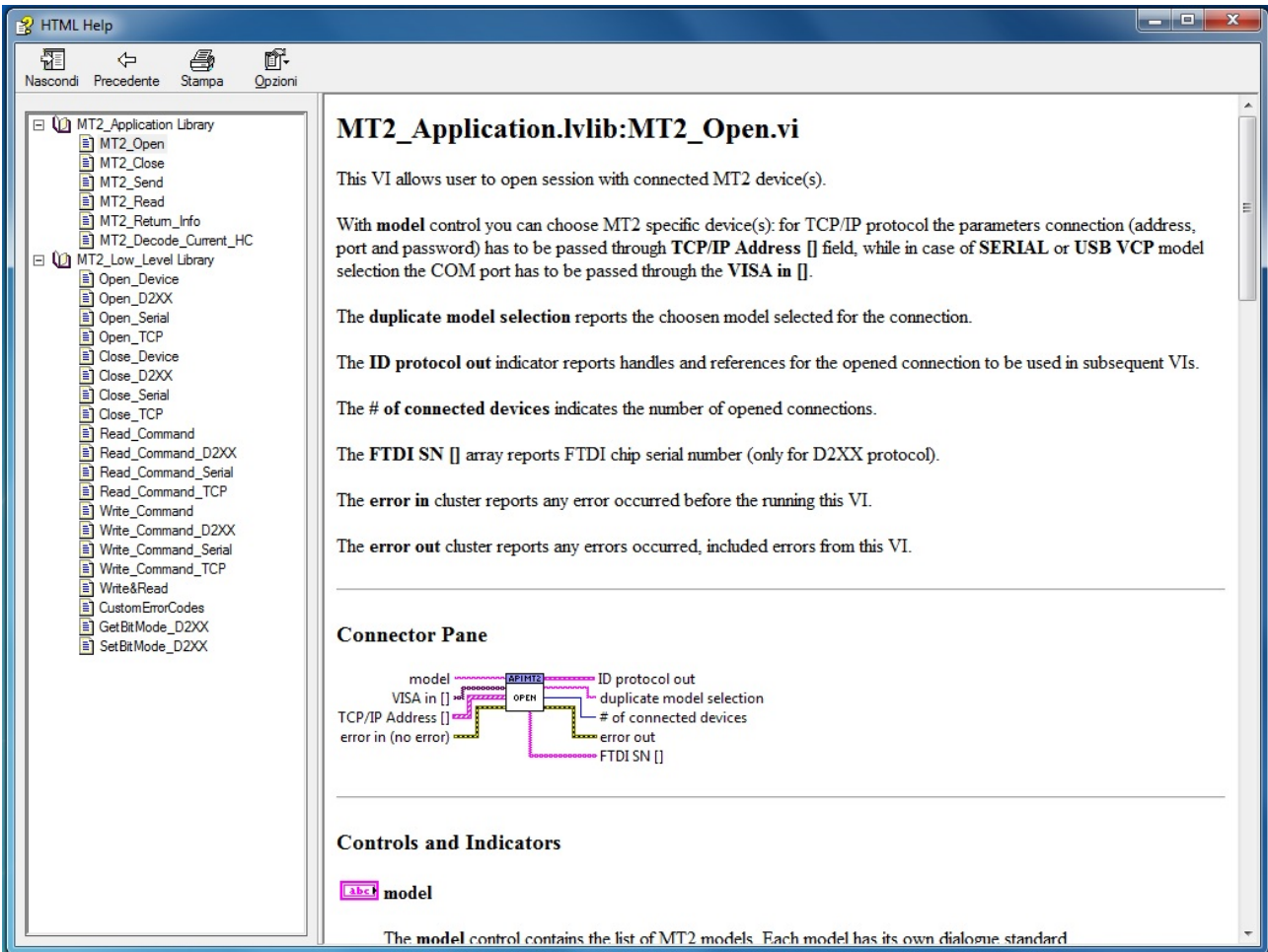
The following table shows the contents of the [MT2_LowLevel.lvlib](#) library:

Function	Properties
Open_Device.vi	Open communication with specific protocol
Open_D2XX.vi	Open communication with USB D2XX library protocol
Open_Serial.vi	Open communication with serial protocol
Open_TCP.vi	Open communication with TCP/IP protocol
Close_Device.vi	Close communication references with all protocols
Close_D2XX.vi	Close communication references with USB D2XX library
Close_Serial.vi	Close communication references with serial protocol
Close_TCP.vi	Close communication references with TCP/IP protocol
Write_Command.vi	Send an ASCII string to desired MT2 device(s)
Write_Command_D2XX.vi	Send an ASCII string to desired MT2 device(s) with USB D2XX protocol
Write_Command_Serial.vi	Send an ASCII string to desired MT2 device(s) with serial protocol
Write_Command_TCP.vi	Send an ASCII string to desired MT2 device(s) with TCP/IP protocol
Read_Command.vi	Read an ASCII string from desired MT2 device(s)
Read_Command_D2XX.vi	Read an ASCII string from desired MT2 device(s) with USB D2XX protocol
Read_Command_Serial.vi	Read an ASCII string from desired MT2 device(s) with serial protocol
Read_Command_TCP.vi	Read an ASCII string from desired MT2 device(s) with TCP/IP protocol
Write&Read.vi	Send and read an ASCII string to/from desired MT2 device(s)
SetBitMode_D2XX.vi	Set pin status of USB FTDI chips (only with D2XX mode)
GetBitMode_D2XX.vi	Get pin status of USB FTDI chips (only with D2XX mode)
CustomErrorCodes.vi	Include custom error codes defined for this library
Protocol Control typedef.ctf	It is a custom control used by the previous VIs

The following table shows the contents of the [MT2_Application.lvlib](#) library:

Function	Properties
MT2_Open.vi	Open communication through selected MT2 device(s)
MT2_Close.vi	Close communication with all MT2 device(s)
MT2_Send.vi	Send a command to desired MT2 device(s)
MT2_Read.vi	Send a request to MT2 device(s) and read the answer
MT2_Return_Info.vi	Support VI to decode MT2 info request
MT2_Decode_Current_HC.vi	Support VI to decode current data into readable format (only for MT2HC devices)
MT2_Model_Selection_Control.ctf	It is a custom control used by the previous VIs

The library is also provided with a help file, the **MT2 LabVIEW Library Help.chm** that provide an explanation for each functions. Graphical representations are realized, so the user may easily understand how these tools work and how to use them in its code. The next picture display this help.



Picture 1: MT2 LabVIEW Library Help

Installation

Run the **Installer_MT2_Library.exe** file to install all files of the MT2 LabVIEW Library.

By default all the files will be placed in the folder C:\IPSES_Lib\MT2.

This process install the LabVIEW library files in subfolder, while example and project files, help file in chm format and the library user manual in the main directory.

Furthermore, the process install also the FTDI D2XX library if not already installed on PC to allow the use of USB communication protocol.

Under **Start → All Program → IPSES MT2 Library** you can find some link to directly access the installed file.

Removal

To correctly remove MT2 LabVIEW Library follow this instruction list:

1. From *Start* menu, click *All Programs* item and then *IPSES MT2 Library* folder.
2. Click *Uninstall MT2 LabVIEW Library.exe* icon
3. Follow the instruction displayed
4. Delete the folder C:\IPSES_Lib\MT2

Alternatively you can follow the next procedure:

1. From Desktop, click *My Computer* icon and choose *Control Panel*
2. Click *Add or Remove Program* from the displayed resource list
3. Select *MT2 LabVIEW Library* and click *Change/Remove* button
4. Follow displayed instructions
5. Delete the folder C:\IPSES_Lib\MT2

MT2 LowLevel.lvlib:Open Device.vi

This VI allows user to open connection to MT2 device, chosen by the **protocol** enumerator.

The **VISA in []** array assigns the communication COM ports for both SERIAL and USB VCP.

The **TCP/IP Address []** array assigns the fields (address, port and password) to open communication via ethernet.

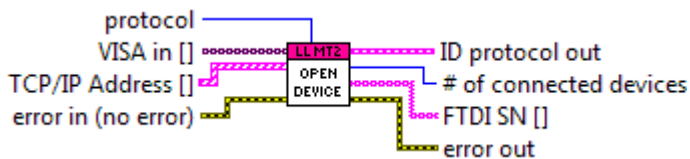
The **ID protocol out** encloses communication protocol description, while the **# of connected devices** reports how many devices are simultaneously connected.

The **FTDI SN []** reports only FTDI serial number chip found and handled.

The **error in** cluster reports any error occurred before the running this VI.

The **error out** cluster reports any errors occurred, included errors from this VI.

Connector Pane



Controls and Indicators



protocol

The **protocol** enum selects the type of communication protocol: Serial or USB VCP, USB D2XX and TCP/IP.



error in (no error)

The **error in** cluster can accept error information wired from VIs previously called. Use this information to select functionalities to be bypassed in case of errors from other VIs.

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



code

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

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



VISA in []

The **VISA in []** is the array of COM port addresses collection used in **SERIAL** and **USB VCP** connection mode.



VISA resource name

The **VISA resource name** specifies the resource to be opened. This control also specifies session and class. It is used with the serial protocol.

Ⓜ TCP/IP Address []

The **TCP/IP Address** [] is the array of TCP/IP data collection (address, port and password) to allows MT2 connection via ethernet.

Ⓜ TCP/IP Address Cluster

Ⓜ Address

The **TCP/IP Address** should be expressed in x.x.x.x format.

Ⓜ Port

The **TCP/IP Port** specifies the communication port over ethernet. Default value, 23, is the Telnet port.

Ⓜ Password

The **TCP/IP Password** is the password to access the Telnet service. Default value is "ipses".

Ⓜ ID protocol out

The **ID protocol out** encloses the currently used communication protocol.

Ⓜ Handle out []

The **Handle out** [] is the array of handles opened with devices connected via D2XX library.

Ⓜ handle

The **handle** contains identification of connection via D2XX library.

Ⓜ VISA out []

The **VISA out** [] is the array of COM port addresses opened in **SERIAL** and **USB VCP** connection mode.

Ⓜ VISA resource name

The **VISA resource name** specifies the resource to be opened. This control also specifies session and class. It is to be used with the serial protocol.

Ⓜ TCP out []

The **TCP out** [] contains the references of every successfully opened devices connected via ethernet.

Ⓜ connection ID

The **connection ID** is the reference for the opened TCP/IP connection.

Ⓜ # of connected devices

The **# of connected devices** relates about the effective number of successfully connected devices, both VCP that in D2XX mode.

Ⓜ error out

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

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

Ⓜ status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

Ⓜ code

code is the error or warning code.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source**

source string describes the origin of the error or warning.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **FTDI SN []**

The **FTDI SN []** is the array of FTDI serial number chip handled. This field is valid only for USB D2XX protocol.

 **SN**

The **SN** is the serial number of the FTDI chip.

MT2_LowLevel.lvlib:Open_D2XX.vi

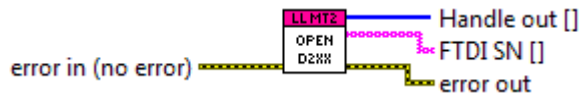
This VI allows user to open connection to MT2 device with FTDI USB D2XX library.

The **Handle out []** array contains the handle references of the opened devices, while the **FTDI SN []** array contains the serial number data read from each FTDI chip.

The **error in** cluster reports any error occurred before the running this VI.

The **error out** cluster reports any errors occurred, included errors from this VI.

Connector Pane



Controls and Indicators

error in (no error)

error in 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.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

code

code is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

source

source describes the origin of the error or warning.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

Handle out []

The **Handle out []** is the array of handles opened with devices connected via D2XX library.

handle

The **handle** contains identification of connection via D2XX library.

FTDI SN []

The **FTDI SN []** contains the S/N list of the opened FTDI devices.

SN

The **SN** contains the serial number of the FTDI device.

error out

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

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code**

code is the error or warning code.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source**

source string describes the origin of the error or warning.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

MT2 LowLevel.lvlib:Open Serial.vi

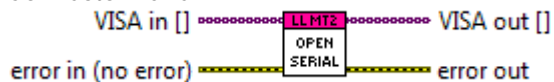
This VI allows user to open connection to MT2 device with SERIAL or USB VCP mode. If almost one port open fails, all connection will be closed.

The **VISA in []** array contains the serial port references to open, while the **VISA out []** array contains the serial port reference opened.

The **error in** cluster reports any error occurred before the running this VI.

The **error out** cluster reports any errors occurred, included errors from this VI.

Connector Pane



Controls and Indicators

VISA in []

The **VISA in []** is the array of COM port addresses collection used in **SERIAL** and **USB VCP** connection mode.

VISA resource name

The **VISA resource name** specifies the resource to be opened. This control also specifies session and class. It is used with the serial protocol.

error in (no error)

error in 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.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

code

code is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

source

source describes the origin of the error or warning.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

VISA out []

The **VISA out []** is the array of COM port addresses opened in **SERIAL** and **USB VCP** connection mode.

VISA resource name out

The **VISA resource name** specifies the resource opened. This control also specifies session and class. It is used with the serial protocol.

error out

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

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code

code is the error or warning code.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source

source string describes the origin of the error or warning.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

MT2_LowLevel.lvlib:Open_TCP.vi

This VI allows user to open connection to MT2 device via TCP/IP protocol. If almost one port open fails, all connection will be closed.

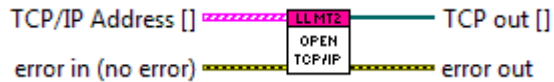
The **TCP/IP Address** [] array contains data (Address, Port and Password) to open the TCP/IP sockets.

The **TCP out** [] array contains the TCP reference to opened sockets.

The **error in** cluster reports any error occurred before the running this VI.

The **error out** cluster reports any errors occurred, included errors from this VI.

Connector Pane



Controls and Indicators

 **error in (no error)**

error in 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.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **status**

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code**

code is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source**

source describes the origin of the error or warning.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **TCP/IP Address []**

The **TCP/IP Address** [] is the array of TCP/IP data collection (address, port and password) to allows MT2 connection via ethernet.

 **TCP/IP Address Cluster**

 **Address**

The **TCP/IP Address** should be expressed in x.x.x.x format.

 **Port**

The **TCP/IP Port** specifies the communication port over ethernet. Default value, 23, is the Telnet port.

 **Password**

The **TCP/IP Password** is the password to access the Telnet service. Default value is "ipses".

 **error out**

error out passes error or warning information out of a VI to be used by other VIs. Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **status**

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code**

code is the error or warning code.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source**

source string describes the origin of the error or warning.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **TCP out []**

The **TCP out []** contains the references of every successfully opened devices connected via ethernet.

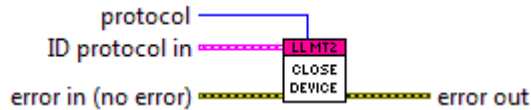
 **connection ID**

The **connection ID** is the reference for the opened TCP/IP connection.

MT2 LowLevel.lvlib:Close Device.vi

This VI allows user to close connection to MT2 device, chosen by the **protocol** enumerator.
 The **ID protocol in** encloses communication protocol description.
 The **error in** cluster reports any error occurred before the running this VI.
 The **error out** cluster reports any errors occurred, included errors from this VI.

Connector Pane



Controls and Indicators



ID protocol in

The **ID protocol in** encloses the currently used communication protocol.



Handle in []

The **Handle in []** is the array of handles opened with devices connected via D2XX library.



handle

The **handle** contains identification of connection via D2XX library.



VISA in []

The **VISA in []** is the array of COM port addresses opened in **SERIAL** and **USB VCP** connection mode.



VISA resource name

The **VISA resource name** specifies the resource to be opened. This control also specifies session and class. It is to be used with the serial protocol.



TCP in []

The **TCP in []** contains the references of every successfully opened devices connected via ethernet.



connection ID

The **connection ID** is the reference for the opened TCP/IP connection.



error in (no error)

error in 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.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code

code is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source

source describes the origin of the error or warning.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



protocol

The **protocol** enum selects the type of communication protocol: Serial or USB VCP, USB D2XX and TCP/IP.



error out

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

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code

code is the error or warning code.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source

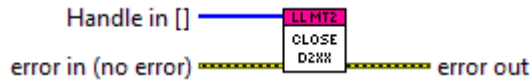
source string describes the origin of the error or warning.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

MT2_LowLevel.lvlib:Close_D2XX.vi

This VI allows user to close the D2XX handles passed in **Handle in []** array.
 The **error in** cluster reports any error occurred before the running this VI.
 The **error out** cluster reports any errors occurred, included errors from this VI.

Connector Pane



Controls and Indicators

error in (no error)

error in 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.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

code

code is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

source

source describes the origin of the error or warning.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

Handle in []

The **Handle in []** is the array of handles opened with devices connected via D2XX library.

handle

The **handle** contains identification of connection via D2XX library.

error out

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

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

code

code is the error or warning code.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 source

source string describes the origin of the error or warning.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

MT2_LowLevel.lvlib:Close_Serial.vi

This VI allows user to close the Serial or USB VCP ports passed in **VISA in []** array.
 The **error in** cluster reports any error occurred before the running this VI.
 The **error out** cluster reports any errors occurred, included errors from this VI.

Connector Pane



Controls and Indicators



error in (no error)

error in 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.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code

code is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source

source describes the origin of the error or warning.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



VISA in []

The **VISA in []** is the array of COM port addresses collection used in **SERIAL** and **USB VCP** connection mode.



VISA resource name

The **VISA resource name** specifies the resource to be opened. This control also specifies session and class. It is used with the serial protocol.



error out

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

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code

code is the error or warning code.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source**

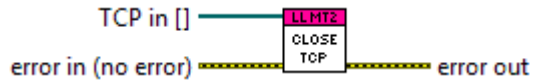
source string describes the origin of the error or warning.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

MT2_LowLevel.lvlib:Close_TCP.vi

This VI allows user to close the TCP/IP references passed in **TCP in []** array.
The **error in** cluster reports any error occurred before the running this VI.
The **error out** cluster reports any errors occurred, included errors from this VI.

Connector Pane



Controls and Indicators



error in (no error)

error in 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.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code

code is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source

source describes the origin of the error or warning.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



TCP in []

The **TCP in []** contains the references of every successfully opened devices connected via ethernet.



connection ID

The **connection ID** is the reference for the opened TCP/IP connection.



error out

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

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code

code is the error or warning code.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 source

source string describes the origin of the error or warning.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

MT2 LowLevel.lvlib:Write Command.vi

This VI allows user to send ASCII string to any previously opened MT2 device.

The **ID protocol in** [] encloses communication protocol references, duplicated on **ID protocol out** [].

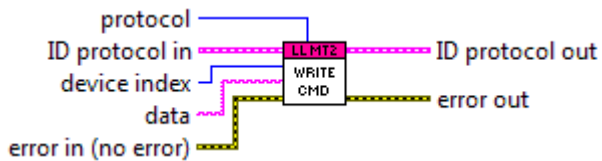
The **protocol** enumerator selects a protocol reference, while the **device index** extract a specific reference in the selected array, corresponding to a specific MT2 device.

The **data** string contains the ASCII string to be sent to the selected device.

The **error in** cluster reports any error occurred before the running this VI.

The **error out** cluster reports any errors occurred, included errors from this VI.

Connector Pane



Controls and Indicators

 data

The **data** string is the ASCII command to be sent.

 device index

The **device index** allows to select an ID from the **ID protocol in** cluster.

 ID protocol in

The **ID protocol in** encloses the currently used communication protocol.

 Handle in []

The **Handle in** [] is the array of handles opened with devices connected via D2XX library.

 handle

The **handle** contains identification of connection via D2XX library.

 VISA in []

The **VISA in** [] is the array of COM port addresses opened in **SERIAL** and **USB VCP** connection mode.

 VISA resource name

The **VISA resource name** specifies the resource to be opened. This control also specifies session and class. It is to be used with the serial protocol.

 TCP in []

The **TCP in** [] contains the references of every successfully opened devices connected via ethernet.

 connection ID

The **connection ID** is the reference for the opened TCP/IP connection.

 protocol

The **protocol** enum selects the type of communication protocol: Serial or USB VCP, USB D2XX and TCP/IP.

 error in (no error)

error in 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.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **status**

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code**

code is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source**

source describes the origin of the error or warning.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **ID protocol out**

The **ID protocol out** encloses the currently used communication protocol.

 **Handle out []**

The **Handle out []** is the array of handles opened with devices connected via D2XX library.

 **handle**

The **handle** contains identification of connection via D2XX library.

 **VISA out []**

The **VISA out []** is the array of COM port addresses opened in **SERIAL** and **USB VCP** connection mode.

 **VISA resource name**

The **VISA resource name** specifies the resource to be opened. This control also specifies session and class. It is to be used with the serial protocol.

 **TCP out []**

The **TCP out []** contains the references of every successfully opened devices connected via ethernet.

 **connection ID**

The **connection ID** is the reference for the opened TCP/IP connection.

 **error out**

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

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **status**

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code**

code is the error or warning code.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source**

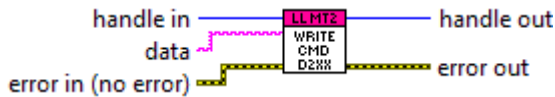
source string describes the origin of the error or warning.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

MT2 LowLevel.lvlib:Write Command D2XX.vi

This VI allows user to send ASCII string to MT2 device via USB D2XX driver protocol. The **handle in** is the D2XX handle reference value, duplicated on **handle out** indicator. The **data** string is the ASCII string to send to the device. The **error in** cluster reports any error occurred before running this VI. The **error out** cluster reports any error occurred, included errors from this VI.

Connector Pane



Controls and Indicators



data

The **data** string is the ASCII command to be sent.



handle in

The **handle in** contains identification of connection via D2XX library.



error in (no error)

error in 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.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code

code is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source

source describes the origin of the error or warning.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



handle out

The **handle out** contains identification of connection via D2XX library.



error out

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

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code**

code is the error or warning code.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source**

source string describes the origin of the error or warning.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

MT2 LowLevel.lvlib:Write Command Serial.vi

This VI allows user to send ASCII string to MT2 device via Serial or USB VCP protocol.

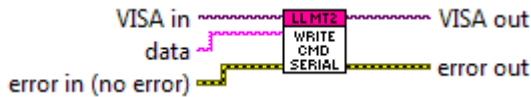
The **VISA in** is the serial port reference value, duplicated on **VISA out** indicator.

The **data** string is the ASCII string to send to the device.

The **error in** cluster reports any error occurred before running this VI.

The **error out** cluster reports any error occurred, included errors from this VI.

Connector Pane



Controls and Indicators



data

The **data** string is the ASCII command to be sent.



error in (no error)

error in 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.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code

code is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source

source describes the origin of the error or warning.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



VISA in

The **VISA in** specifies the resource to be opened. This control also specifies session and class. It is used with the serial protocol.



error out

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

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **I32** code

code is the error or warning code.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **abc** source

source string describes the origin of the error or warning.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **I70** VISA out

The **VISA out** specifies the resource to be opened. This control also specifies session and class. It is used with the serial protocol.



MT2 LowLevel.lvlib:Write Command TCP.vi

This VI allows user to send ASCII string to MT2 device via TCP/IP protocol.

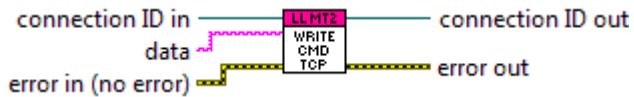
The **connection ID in** is the TCP/IP handle reference value, duplicated on **connection ID out** indicator.

The **data** string is the ASCII string to send to the device.

The **error in** cluster reports any error occurred before running this VI.

The **error out** cluster reports any error occurred, included errors from this VI.

Connector Pane



Controls and Indicators



data

The **data** string is the ASCII command to be sent.



error in (no error)

error in 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.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code

code is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source

source describes the origin of the error or warning.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



connection ID in

The **connection ID in** is the reference for the opened TCP/IP connection.



error out

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

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code

code is the error or warning code.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source**

source string describes the origin of the error or warning.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **connection ID out**

The **connection ID out** is the reference for the opened TCP/IP connection.

MT2 LowLevel.lvlib:Read Command.vi

This VI allows user to read ASCII string answer from any previous opened MT2 device.

The **ID protocol in** [] encloses communication protocol references, duplicated on **ID protocol out** [].

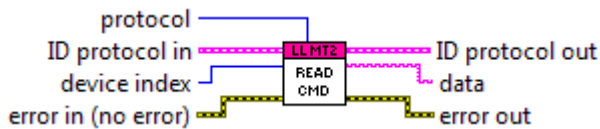
The **protocol** enumerator selects a protocol reference, while the **device index** extract a specific reference in the selected array, corresponding to a specific MT2 device.

The **data** string contains the ASCII string answer from the selected device.

The **error in** cluster reports any error occurred before the running this VI.

The **error out** cluster reports any errors occurred, included errors from this VI.

Connector Pane



Controls and Indicators

device index

The **device index** allows to select an ID from the **ID protocol in** cluster.

ID protocol in

The **ID protocol in** encloses the currently used communication protocol.

Handle in []

The **Handle in** [] is the array of handles opened with devices connected via D2XX library.

handle

The **handle** contains identification of connection via D2XX library.

VISA in []

The **VISA in** [] is the array of COM port addresses opened in **SERIAL** and **USB VCP** connection mode.

VISA resource name

The **VISA resource name** specifies the resource to be opened. This control also specifies session and class. It is to be used with the serial protocol.

TCP in []

The **TCP in** [] contains the references of every successfully opened devices connected via ethernet.

connection ID

The **connection ID** is the reference for the opened TCP/IP connection.

protocol

The **protocol** enum selects the type of communication protocol: Serial or USB VCP, USB D2XX and TCP/IP.

error in (no error)

error in 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.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **I32** code

code is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **abc** source

source describes the origin of the error or warning.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **abc** data

The **data** string is the ASCII answer from the device.

 **ID** ID protocol out

The **ID protocol out** encloses the currently used communication protocol.

 **U32** Handle out []

The **Handle out []** is the array of handles opened with devices connected via D2XX library.

 **U32** handle

The **handle** contains identification of connection via D2XX library.

 **I/O** VISA out []

The **VISA out []** is the array of COM port addresses opened in **SERIAL** and **USB VCP** connection mode.

 **I/O** VISA resource name

The **VISA resource name** specifies the resource to be opened. This control also specifies session and class. It is to be used with the serial protocol.

 **D** TCP out []

The **TCP out []** contains the references of every successfully opened devices connected via ethernet.

 **D** connection ID

The **connection ID** is the reference for the opened TCP/IP connection.

 **Error** error out

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

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **TF** status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **I32** code

code is the error or warning code.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 source

source string describes the origin of the error or warning.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

MT2 LowLevel.lvlib:Read Command D2XX.vi

This VI allows user to read ASCII string answer from MT2 device via USB D2XX driver protocol.

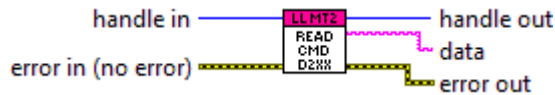
The **handle in** is the D2XX handle reference value, duplicated on **handle out** indicator.

The **data** string is the ASCII answer received from the device.

The **error in** cluster reports any error occurred before running this VI.

The **error out** cluster reports any error occurred, included errors from this VI.

Connector Pane



Controls and Indicators

handle in

The **handle in** contains identification of connection via D2XX library.

error in (no error)

error in 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.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

code

code is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

source

source describes the origin of the error or warning.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

data

The **data** string is the ASCII answer from the device.

handle out

The **handle out** contains identification of connection via D2XX library.

error out

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

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code**

code is the error or warning code.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source**

source string describes the origin of the error or warning.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

MT2 LowLevel.lvlib:Read Command Serial.vi

This VI allows user to read ASCII string answer from MT2 device via Serial or USB VCP protocol.

The **VISA in** is the serial port reference value, duplicated on **VISA out** indicator.

The **data** string is the ASCII answer received from the device.

The **error in** cluster reports any error occurred before running this VI.

The **error out** cluster reports any error occurred, included errors from this VI.

Connector Pane



Controls and Indicators

error in (no error)

error in 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.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

code

code is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

source

source describes the origin of the error or warning.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

VISA in

The **VISA in** specifies the resource to be opened. This control also specifies session and class. It is used with the serial protocol.

data

The **data** string is the ASCII answer from the device.

error out

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

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code**

code is the error or warning code.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source**

source string describes the origin of the error or warning.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **VISA out**

The **VISA out** specifies the resource to be opened. This control also specifies session and class. It is used with the serial protocol.

MT2 LowLevel.lvlib:Read Command TCP.vi

This VI allows user to read ASCII string answer from MT2 device via TCP/IP protocol.

The **connection ID in** is the TCP/IP handle reference value, duplicated on **connection ID out** indicator.

The **data** string is the ASCII answer received from the device.

The **error in** cluster reports any error occurred before running this VI.

The **error out** cluster reports any error occurred, included errors from this VI.

Connector Pane



Controls and Indicators

error in (no error)

error in 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.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

code

code is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

source

source describes the origin of the error or warning.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

connection ID in

The **connection ID in** is the reference for the opened TCP/IP connection.

data

The **data** string is the ASCII answer from the device.

error out

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

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

code

code is the error or warning code.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source**

source string describes the origin of the error or warning.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **connection ID out**

The **connection ID out** is the reference for the opened TCP/IP connection.

MT2_LowLevel.lvlib:Write&Read.vi

This VI allows user to send and read ASCII string to any previously opened MT2 device.

The **ID protocol in** [] encloses communication protocol references, duplicated on **ID protocol out** [].

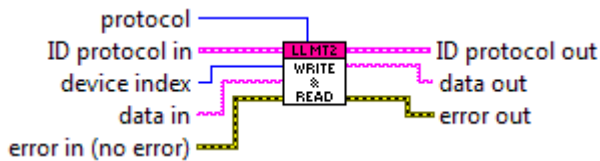
The **protocol** enumerator selects a protocol reference, while the **device index** extract a specific reference in the selected array, corresponding to a specific MT2 device.

The **data in** string contains the ASCII command to be sent to the selected device, while the **data out** string is the ASCII answer from the device.

The **error in** cluster reports any error occurred before the running this VI.

The **error out** cluster reports any errors occurred, included errors from this VI.

Connector Pane



Controls and Indicators



data in

The **data in** string is the ASCII command to be sent.



device index

The **device index** allows to select an ID from the **ID protocol in** cluster.



ID protocol in

The **ID protocol in** encloses the currently used communication protocol.



Handle in []

The **Handle in** [] is the array of handles opened with devices connected via D2XX library.



handle

The **handle** contains identification of connection via D2XX library.



VISA in []

The **VISA in** [] is the array of COM port addresses opened in **SERIAL** and **USB VCP** connection mode.



VISA resource name

The **VISA resource name** specifies the resource to be opened. This control also specifies session and class. It is to be used with the serial protocol.



TCP in []

The **TCP in** [] contains the references of every successfully opened devices connected via ethernet.



connection ID

The **connection ID** is the reference for the opened TCP/IP connection.



protocol

The **protocol** enum selects the type of communication protocol: Serial or USB VCP, USB D2XX and TCP/IP.



error in (no error)

error in 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.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code

code is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source

source describes the origin of the error or warning.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



ID protocol out

The **ID protocol out** encloses the currently used communication protocol.



Handle out []

The **Handle out []** is the array of handles opened with devices connected via D2XX library.



handle

The **handle** contains identification of connection via D2XX library.



VISA out []

The **VISA out []** is the array of COM port addresses opened in **SERIAL** and **USB VCP** connection mode.



VISA resource name

The **VISA resource name** specifies the resource to be opened. This control also specifies session and class. It is to be used with the serial protocol.



TCP out []

The **TCP out []** contains the references of every successfully opened devices connected via ethernet.



connection ID

The **connection ID** is the reference for the opened TCP/IP connection.



error out

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

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code

code is the error or warning code.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source**

source string describes the origin of the error or warning.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **data out**

The **data out** string is the ASCII answer from the device.

MT2 LowLevel.lvlib:SetBitMode D2XX.vi

This VI allows user to set the value of FTDI chip's data bus. This function is available only in **USB D2XX** mode.

The **Handle in []** array encloses the description of every successfully opened devices and it is duplicated on **Handle out []** indicator.

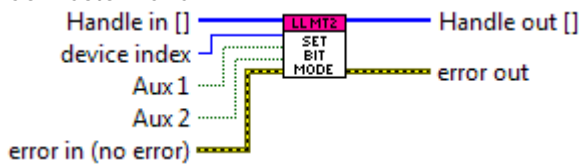
The **device index** address the related device.

The **Aux 1** and **Aux 2** select the boolean value of the respective outputs of the selected device.

The **error in** cluster reports any error occurred before running this VI.

The **error out** cluster reports any error occurred, included errors from this VI.

Connector Pane



Controls and Indicators



Aux 1

The **Aux 1** control sets the boolean status of FTDI chip's data bus Aux 1 pin .



Aux 2

The **Aux 2** control sets the boolean status of FTDI chip's data bus Aux 2 pin .



Handle in []

The **Handle in []** is the array of handles opened with devices connected via D2XX library.



handle

The **handle** contains identification of connection via D2XX library.



device index

The **device index** allows to select an ID from the **Handle in []** array.



error in (no error)

error in 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.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code

code is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source

source describes the origin of the error or warning.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

Handle out []

The **Handle out** [] is the array of handles opened with devices connected via D2XX library.

handle

The **handle** contains identification of connection via D2XX library.

error out

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

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

code

code is the error or warning code.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

source

source string describes the origin of the error or warning.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

MT2 LowLevel.lvlib:GetBitMode D2XX.vi

This VI allows user to read the instantaneous value of FTDI chip's data bus. This function is available only in **USB D2XX** mode.

The **Handle in []** array encloses the description of every successfully opened devices and it is duplicated on **Handle out []** indicator.

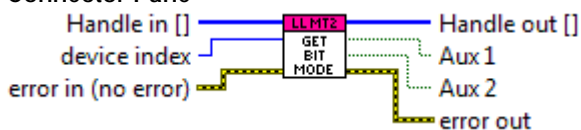
The **device index** address the related device.

The **Aux 1** and **Aux 2** indicate the boolean value of the respective outputs of the selected device.

The **error in** cluster reports any error occurred before running this VI.

The **error out** cluster reports any error occurred, included errors from this VI.

Connector Pane



Controls and Indicators

device index

The **device index** allows to select an ID from the **Handle in []** array.

Handle in []

The **Handle in []** is the array of handles opened with devices connected via D2XX library.

handle

The **handle** contains identification of connection via D2XX library.

error in (no error)

error in 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.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

code

code is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

source

source describes the origin of the error or warning.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

Aux 1

The **Aux 1** reports the boolean value of FTDI chip's Aux 1 output of the selected device.

Aux 2

The **Aux 2** reports the boolean value of FTDI chip's Aux 2 output of the selected device.

 **U32** Handle out []

The **Handle out** [] is the array of handles opened with devices connected via D2XX library.

 **U32** handle

The **handle** contains identification of connection via D2XX library.

 **error out**

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

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **TF** status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **I32** code

code is the error or warning code.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **abc** source

source string describes the origin of the error or warning.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

MT2_LowLevel.lvlib:CustomErrorCodes.vi

This VI provide custom error messages based on input **code** value.



code

The **code** control accepts a valid custom error code defined in this VI to generate a specific error message.

error out

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

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

code

code is the error or warning code.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

source

source string describes the origin of the error or warning.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

MT2_Application.lvlib:MT2_Open.vi

This VI allows user to open session with connected MT2 device(s).

With **model** control you can choose MT2 specific device(s): for TCP/IP protocol the parameters connection (address, port and password) has to be passed through **TCP/IP Address []** field, while in case of **SERIAL** or **USB VCP** model selection the COM port has to be passed through the **VISA in []**.

The **duplicate model selection** reports the choosen model selected for the connection.

The **ID protocol out** indicator reports handles and references for the opened connection to be used in subsequent VIs.

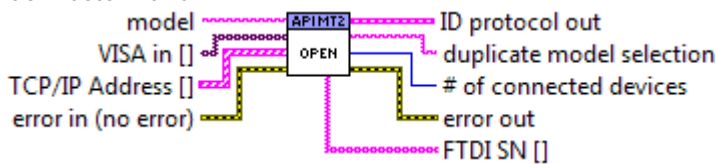
The **# of connected devices** indicates the number of opened connections.

The **FTDI SN []** array reports FTDI chip serial number (only for D2XX protocol).

The **error in** cluster reports any error occurred before the running this VI.

The **error out** cluster reports any errors occurred, included errors from this VI.

Connector Pane



Controls and Indicators



model

The **model** control contains the list of MT2 models. Each model has its own dialogue standard.



error in (no error)

The **error in** cluster can accept error information wired from VIs previously called. Use this information to select functionalities to be bypassed in case of errors from other VIs.

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



code

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

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



VISA in []

The **VISA in []** control is the array of COM port addresses to open in SERIAL and USB VCP connection mode.



VISA resource name

The **VISA resource name** specifies the resource to be opened. This control also specifies session and class. It is to be used with the serial protocol.

TCP/IP Address []

The **TCP/IP Address** [] is the array of TCP/IP data collection (address, port and password) to allows MT2 connection via ethernet.

TCP/IP Address Cluster

Address

The **TCP/IP Address** should be expressed in x.x.x.x format.

Port

The **TCP/IP Port** specifies the communication port over ethernet. Default value, 23, is the Telnet port.

Password

The **TCP/IP Password** is the password to access the Telnet service. Default value is "ipses".

duplicate model selection

The **duplicate model selection** reports the chosen model selected for the connection.

error out

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

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

code

code is the error or warning code.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

source

source string describes the origin of the error or warning.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

ID protocol out

The **ID protocol out** encloses the currently used communication protocol.

Handle out []

The **Handle out** [] is the array of handles opened with devices connected via D2XX library.

handle

The **handle** contains identification of connection via D2XX library.

VISA out []

The **VISA out** [] is the array of COM port addresses opened in **SERIAL** and **USB VCP** connection mode.

VISA resource name

The **VISA resource name** specifies the resource to be opened. This control also specifies session and class. It is to be used with the serial protocol.

 TCP out []

The **TCP out** [] contains the references of every successfully opened devices connected via ethernet.

 connection ID

The **connection ID** is the reference for the opened TCP/IP connection.

 # of connected devices

The **# of connected devices** relates about the effective number of successfully connected devices.

 FTDI SN []

The **FTDI SN** [] is the array of FTDI serial number chip handled. This field is valid only for USB D2XX protocol.

 SN

The **SN** is the serial number of the FTDI chip.

MT2_Application.lvlib:MT2_Close.vi

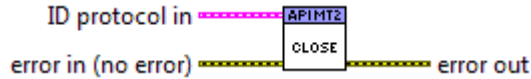
This VI allows user to close any session and reference previously opened with MT2 device(s).

The **ID protocol in** includes connection protocol information.

The **error in** cluster reports any error occurred before the running this VI.

The **error out** cluster reports any errors occurred, included errors from this VI.

Connector Pane



Controls and Indicators

ID protocol in

The **ID protocol in** encloses the currently used communication protocol.

Handle in []

The **Handle in []** is the array of handles opened with devices connected via D2XX library.

handle

The **handle** contains identification of connection via D2XX library.

VISA in []

The **VISA in []** is the array of COM port addresses opened in **SERIAL** and **USB VCP** connection mode.

VISA resource name

The **VISA resource name** specifies the resource to be opened. This control also specifies session and class. It is to be used with the serial protocol.

TCP in []

The **TCP in []** contains the references of every successfully opened devices connected via ethernet.

connection ID

The **connection ID** is the reference for the opened TCP/IP connection.

error in (no error)

error in 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.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

code

code is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

source

source describes the origin of the error or warning.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



error out

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

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code

code is the error or warning code.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source

source string describes the origin of the error or warning.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

MT2_Application.lvlib:MT2_Send.vi

This VI allows user to send commands to MT2 device(s).

The **model** selects the specific protocol to use from **ID protocol in** cluster and the **device index** control addresses a reference of the protocol.

The **command** string encloses a set of allowed commands for all MT2 devices. Besides it is possible to send a manual commands not included in this list, passing a properly formatted string to the **string** control. Refer to specific MT2 User Manual for complete command list.

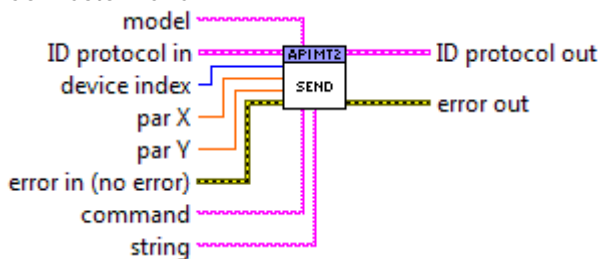
The **par X**, **par Y** and **string** controls are the command parameter inputs.

The **ID protocol out** is a duplicate of the **ID protocol in** cluster.

The **error in** cluster reports any error occurred before this VI.

The **error out** reports any errors occurred, included errors from this VI.

Connector Pane



Controls and Indicators



par X

The **par X** receives parameters to be used for X axis and as first parameter commands.



par Y

The **par Y** receives parameters to be used for Y axis.



string

The **string** receives password and address characters to establish TCP/IP connection.



device index

The **device index** allows to index a reference form the **ID protocol in** cluster.



ID protocol in

The **ID protocol in** encloses the currently used communication protocol.



Handle in []

The **Handle in []** is the array of handles opened with devices connected via D2XX library.



handle

The **handle** contains identification of connection via D2XX library.



VISA in []

The **VISA in []** is the array of COM port addresses opened in **SERIAL** and **USB VCP** connection mode.



VISA resource name

The **VISA resource name** specifies the resource to be opened. This control also specifies session and class. It is to be used with the serial protocol.



TCP in []

The **TCP in** [] contains the references of every successfully opened devices connected via ethernet.

 connection ID

The **connection ID** is the reference for the opened TCP/IP connection.

 model

The **model** control contains the list of MT2 models. Each model has its own dialogue standard.

 command

The **command** control lists allowed setting commands for all MT2 series devices.

 error in (no error)

error in 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.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 code

code is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 source

source describes the origin of the error or warning.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 error out

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

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 code

code is the error or warning code.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 source

source string describes the origin of the error or warning.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 ID protocol out

The **ID protocol out** encloses the currently used communication protocol.

 **UI32** Handle out []

The **Handle out** [] is the array of handles opened with devices connected via D2XX library.

 **UI32** handle

The **handle** contains identification of connection via D2XX library.

 **I/O** VISA out []

The **VISA out** [] is the array of COM port addresses opened in **SERIAL** and **USB VCP** connection mode.

 **I/O** VISA resource name

The **VISA resource name** specifies the resource to be opened. This control also specifies session and class. It is to be used with the serial protocol.

 **I/O** TCP out []

The **TCP out** [] contains the references of every successfully opened devices connected via ethernet.

 **I/O** connection ID

The **connection ID** is the reference for the opened TCP/IP connection.

MT2_Application.lvlib:MT2_Read.vi

This VI allows user to send requests to MT2 device(s).

The **model** selects the specific protocol to use from **ID protocol in** cluster and the **device index** control addresses a reference of the protocol.

The **command** string encloses a set of allowed command request for all MT2 devices. Besides it is possible to pass to this string a direct command properly formatted with terminator char. Refer to specific MT2 User Manual for complete command list.

The **ID protocol out** is a duplicate of the **ID protocol in** cluster.

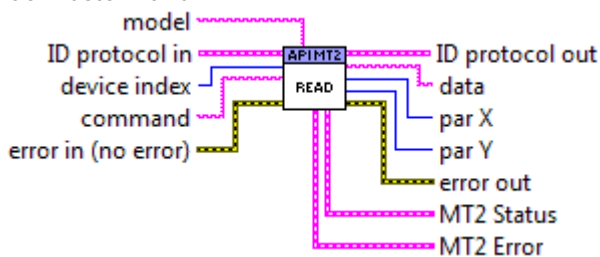
The **Data** indicator reports output string read form the device, while **par X** and **par Y** indicators reports converted output (where used).

The **MT2 Status** and **MT2 Error** clusters are the boolean representation for the status command request. Refer to specific MT2 User Manual for the meaning of each bit.

The **error in** cluster reports any error occurred before this VI.

The **error out** reports any errors occurred, included errors from this VI.

Connector Pane



Controls and Indicators

ID protocol in

The **ID protocol in** encloses the currently used communication protocol.

Handle in []

The **Handle in []** is the array of handles opened with devices connected via D2XX library.

handle

The **handle** contains identification of connection via D2XX library.

VISA in []

The **VISA in []** is the array of COM port addresses opened in **SERIAL** and **USB VCP** connection mode.

VISA resource name

The **VISA resource name** specifies the resource to be opened. This control also specifies session and class. It is to be used with the serial protocol.

TCP in []

The **TCP in []** contains the references of every successfully opened devices connected via ethernet.

connection ID

The **connection ID** is the reference for the opened TCP/IP connection.

error in (no error)

error in 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.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 code

code is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 source

source describes the origin of the error or warning.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 device index

The **device index** allows to index a reference form the **ID protocol in** cluster.

 command

The **command** control lists allowed request commands for all MT2 series devices.

You can use the string control as a direct command line: in this case remember to use the appropriate string terminator char for the command to send.

Refer to specific MT2 User Manual for the allowed list of commands.

 model

The **model** control contains the list of MT2 models. Each model has its own dialogue standard.

 MT2 Status

The **MT2 Status** cluster is a collection of boolean values that represents the status of the device. See the specific MT2 device User Manual for the meaning of each bit.

 BIT 0

 BIT 1

 BIT 2

 BIT 3

 BIT 4

 BIT 5

 BIT 6

 BIT 7

 par X

The **par X** is referred to X axes parameter.

 par Y

The **par Y** is referred to Y axes parameter.

 data

The **data** indicator is the answer from the device in ASCII format.

 MT2 Error

The **MT2 Error** cluster is a collection of boolean values that represents the errors generated by the device.

See the specific MT2 device User Manual for the meaning of each bit.

 BIT 0

 BIT 1

 BIT 2

 BIT 3

 BIT 4

 BIT 5

 BIT 6

 BIT 7

 error out

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

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 code

code is the error or warning code.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 source

source string describes the origin of the error or warning.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 ID protocol out

The **ID protocol out** encloses the currently used communication protocol.

 Handle out []

The **Handle out []** is the array of handles opened with devices connected via D2XX library.

 handle

The **handle** contains identification of connection via D2XX library.

 VISA out []

The **VISA out []** is the array of COM port addresses opened in **SERIAL** and **USB VCP** connection mode.

 VISA resource name

The **VISA resource name** specifies the resource to be opened. This control also specifies session and class. It is to be used with the serial protocol.

 TCP out []

The **TCP out []** contains the references of every successfully opened devices connected via ethernet.



connection ID

The **connection ID** is the reference for the opened TCP/IP connection.

MT2_Application.lvlib:MT2_Return_Info.vi

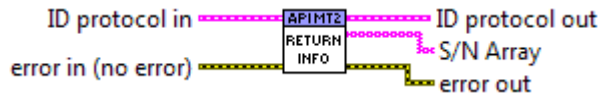
This VI returns to user the S/N list of connected device(s) in the **S/N Array** indicator.

The **ID protocol in** cluster encloses communication protocols to query, while the **ID protocol out** cluster is a duplicate of the input.

The **error in** cluster reports any error occurred before this VI.

The **error out** cluster reports any errors occurred, included errors from this VI.

Connector Pane



Controls and Indicators

ID protocol in

The **ID protocol in** encloses the currently used communication protocol.

Handle in []

The **Handle in []** is the array of handles opened with devices connected via D2XX library.

handle

The **handle** contains identification of connection via D2XX library.

VISA in []

The **VISA in []** is the array of COM port addresses opened in **SERIAL** and **USB VCP** connection mode.

VISA resource name

The **VISA resource name** specifies the resource to be opened. This control also specifies session and class. It is to be used with the serial protocol.

TCP in []

The **TCP in []** contains the references of every successfully opened devices connected via ethernet.

connection ID

The **connection ID** is the reference for the opened TCP/IP connection.

error in (no error)

error in 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.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

code

code is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 source

source describes the origin of the error or warning.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 S/N Array

The **S/N Array** lists the S/N of each device opened.

 S/N string

The **S/N string** reports the S/N code.

 error out

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

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 code

code is the error or warning code.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 source

source string describes the origin of the error or warning.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 ID protocol out

The **ID protocol out** encloses the currently used communication protocol.

 Handle out []

The **Handle out []** is the array of handles opened with devices connected via D2XX library.

 handle

The **handle** contains identification of connection via D2XX library.

 VISA out []

The **VISA out []** is the array of COM port addresses opened in **SERIAL** and **USB VCP** connection mode.

 VISA resource name

The **VISA resource name** specifies the resource to be opened. This control also specifies session and class. It is to be used with the serial protocol.

 TCP out []

The **TCP out []** contains the references of every successfully opened devices connected via ethernet.

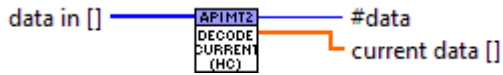
 connection ID

The **connection ID** is the reference for the opened TCP/IP connection.

MT2_Application.lvlib:MT2_Decode_Current_HC.vi

This VI allows user to decode current data for motor phases, read from MT2HC device only.

Connector Pane



Controls and Indicators

 data in []

The **data in []** array receives buffered data from read command.



 current data []

The **current data []** array indicator shows the current measurement.



 #data

The **#data** indicator reports the data dimension for phases.

Custom Error Codes

The following table reports the custom error codes implemented in this library.

Code	Description
+6001	Undefined warning or error
-6000	Invalid protocol selection
-6001	Invalid FTDI D2XX library version
-6002	FTDI D2XX ListDevices error status
-6003	FTDI D2XX ListDevices SN error status
-6004	FTDI D2XX OpenBySerial error status
-6005	FTDI D2XX SetBaudRate error status
-6006	FTDI D2XX SetDataCharacteristics error status
-6007	FTDI D2XX SetFlowControl error status
-6008	FTDI D2XX SetTimeouts error status
-6009	TCP/IP Timeout connection
-6010	TCP/IP incorrect password
-6011	Invalid device index selection
-6012	FTDI D2XX Write error status
-6013	FTDI D2XX Read error status
-6020	Impossible connection to the chosen device
-6021	Invalid model selection
-6030	Invalid parameter(s)
-6031	Unknown command selection
-6032	No device answer

The code node in the CustomErrorCodes.vi accepts any number: if the value passed to this VI is not implemented it generates warning 6001.

Model Selector

The model selector allows to set the correct protocol communication related to selected MT2 device. The following table lists the allowed strings for the **model** enumerator.

Model string	Protocol
MT2	Serial
MT2_MS	Serial
MT2_ETH	TCP/IP
MT2_MS_ETH	TCP/IP
MT2_USB_VCP	Serial (VCP)
MT2_MS_USB_VCP	Serial (VCP)
MT2_USB_D2XX	D2XX
MT2_MS_USB_D2XX	D2XX
MT2HC	Serial
MT2HC_USB_D2XX	D2XX

Any different string produce the selection of a default Serial protocol.

Send and Read Command Selector

The selectors for send and read commands are string combo box. These selectors implement a list of allowed commands, but it is possible to send a user command not yet implemented.

The implemented commands refer to all MT2 devices, so some command are unavailable for some devices and vice versa.

For the *MT2_Send.vi* set the **command** control to **SendString** and put the ASCII string to the **string** control. Remember to use the correct terminator char for the message.

For the *MT2_Read.vi* any unknown **command** string is send directly to the selected device. Remember to use the correct terminator char for the message.

For further information about syntax and messages refers to specific device user manual.

Usability

Every VIs of this library is not protected and modifiable according to user needs.

Furthermore a runnable example VI is provided to facilitate the learning and the implementation of custom code.

CONTACTS

IPSES S.r.l. conceives, projects and markets electronic and scientific instruments. The customized planning of our devices allows us to answer specific necessities for customers asking for embedded systems. IPSES clients enjoy access to a dedicated project engineering team, available as needed.

Our pool consists of highly competent professionals whose experience in this field is extremely strong. Thanks to constant updating and technical development, IPSES is a leading company, combining the dynamism of a young group into the competence and reliability of a qualified staff.

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SUPPORT INFORMATION

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PROBLEM REPORT

The next page is a standard template used for reporting system problems. It can be copied and send as a fax. Alternative bugs may be reported by emails, in this case please insure that the mail contains similar information listed in the *Engineering Problem Report* form.

ENGINEERING PROBLEM REPORT

Problem describer

Name		IPSES s.r.l. Via Suor Lazzarotto, 10 Cesate (MI) Italy Fax (+39) 02 700403170 e-mail support@ipses.com
Company		
Date	Tel.	

Product

Name	Version	Serial No.
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Report Type (bug, change request or technical problem)

Major bug	<input type="checkbox"/>	Urgency:	
Minor bug	<input type="checkbox"/>	High	<input type="checkbox"/>
Change request	<input type="checkbox"/>	Medium	<input type="checkbox"/>
Technical problem	<input type="checkbox"/>	Low	<input type="checkbox"/>

Problem Description

Reproduction of Problem

IPSES S.r.l. Action notes

Received by	Date	Report No.	Action
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(Product code MT2 LABVIEW LIBRARY Rel. 02.00.0001)

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