ESP302 Command Interface V1.0.x

April 2020

GetLibraryVersion

Syntax

C# prototype

int GetLibraryVersion (out string LibraryVersionString)

Python prototype

[LibraryVersionString] GetLibraryVersion ()

Parameters

Input parameters

None

Output parameters

(string) LibraryVersionString: Library DLL Version

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to get the library version.

OpenInstrument

Syntax

C# prototype

int OpenInstrument (string address, int port, int readingTimeout)

Python prototype

[ ] OpenInstrument (address, port, timeout)

Parameters

Input parameters

(string) IP_Address: IP address of instrument.

(int) Port: Port number (5002).

(int) readingTimeout: Timeout in milliseconds to receive an ESP302 response.

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to create a socket to open a TCP/IP communication. This socket is attached to the current ESP302 instance. The timeout to send a command is set to 1 second by default.

NOTE: The port must be 5002 to be compatible with this driver.

CloseInstrument

Syntax

C# prototype

int CloseInstrument ( )

Python prototype

[ ] CloseInstrument ( )

Parameters

Input parameters

None

Output parameters

None

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to close the current socket attached to the ESP302 instance.

SetTimeout

Syntax

C# prototype

int SetTimeout (int sendingTimeout, int readingTimeout)

Python prototype

[errstring] SetTimeout (int sendingTimeout, int readingTimeout)

Parameters

Input parameters

(int) sendingTimeout: Timeout to send a ESP302 command in milliseconds.

(int) readingTimeout: Timeout to read the ESP302 response in milliseconds.

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to configure socket timeout to send and to read.

WriteToInstrument

Syntax

C# prototype

int WriteToInstrument (string command, out string response, out string errstring)

Python prototype

[response, errstring] WriteToInstrument (command)

Parameters

Input parameters

(string) command: ESP302 command to send (command format is “xxAAnn”)

Output parameters

(string) response: ESP302 response

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to send command and receive response from current ESP302.

AB

Syntax

C# prototype

int AB(out string errstring)

Python prototype

[errstring] AB ()

Parameters

Input parameters

None

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous AB command which is used to emergency stop - abort motion on all axes. Refer to the ESP302 Programmer's manual to get the command description.

AC_Get

Syntax

C# prototype

int AC_Get(Int32 axisNumber, out float accelerationValue, out string errstring)

Python prototype

[accelerationValue, errstring] AC_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) accelerationValue: accelerationValue

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous AC_Get command which is used to gets the acceleration/deceleration value for an axis. Refer to the ESP302 Programmer's manual to get the command description.

AC

Syntax

C# prototype

int AC(Int32 axisNumber, float accelerationValue, out string errstring)

Python prototype

[errstring] AC (axisNumber, accelerationValue)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(float) accelerationValue: accelerationValue

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous AC command which is used to sets the acceleration/deceleration value for an axis. Refer to the ESP302 Programmer's manual to get the command description.

AE_Get

Syntax

C# prototype

int AE_Get(Int32 axisNumber, out float decelerationValue, out string errstring)

Python prototype

[decelerationValue, errstring] AE_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) decelerationValue: decelerationValue

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous AE_Get command which is used to gets the emergency stop . Refer to the ESP302 Programmer's manual to get the command description.

AF_Get

Syntax

C# prototype

int AF_Get(Int32 axisNumber, out float feedForwardGainFactor, out string errstring)

Python prototype

[feedForwardGainFactor, errstring] AF_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) feedForwardGainFactor: feedForwardGainFactor

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous AF_Get command which is used to gets the acceleration feed-forward gain for an axis. Refer to the ESP302 Programmer's manual to get the command description.

AF

Syntax

C# prototype

int AF(Int32 axisNumber, float feedForwardGainFactor, out string errstring)

Python prototype

[errstring] AF (axisNumber, feedForwardGainFactor)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(float) feedForwardGainFactor: feedForwardGainFactor

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous AF command which is used to sets the acceleration feed-forward gain for an axis. Refer to the ESP302 Programmer's manual to get the command description.

AP

Syntax

C# prototype

int AP(out string errstring)

Python prototype

[errstring] AP ()

Parameters

Input parameters

None

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous AP command which is used to abort all program execution. Refer to the ESP302 Programmer's manual to get the command description.

AP

Syntax

C# prototype

int AP(string taskName, out string errstring)

Python prototype

[errstring] AP (taskName)

Parameters

Input parameters

(string) taskName: taskName

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous AP command which is used to abort a program execution. Refer to the ESP302 Programmer's manual to get the command description.

AU_Get

Syntax

C# prototype

int AU_Get(Int32 axisNumber, out float accelerationAndDecelerationValue, out string errstring)

Python prototype

[accelerationAndDecelerationValue, errstring] AU_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) accelerationAndDecelerationValue: accelerationAndDecelerationValue

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous AU_Get command which is used to gets the maximum acceleration/deceleration values for an axis. Refer to the ESP302 Programmer's manual to get the command description.

BA_Get

Syntax

C# prototype

int BA_Get(Int32 axisNumber, out float backlashCompensationValue, out string errstring)

Python prototype

[backlashCompensationValue, errstring] BA_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) backlashCompensationValue: backlashCompensationValue

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous BA_Get command which is used to gets the backlash compensation for an axis. Refer to the ESP302 Programmer's manual to get the command description.

BA

Syntax

C# prototype

int BA(Int32 axisNumber, float backlashCompensationValue, out string errstring)

Python prototype

[errstring] BA (axisNumber, backlashCompensationValue)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(float) backlashCompensationValue: backlashCompensationValue

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous BA command which is used to sets the backlash compensation for an axis. Refer to the ESP302 Programmer's manual to get the command description.

BG_Get

Syntax

C# prototype

int BG_Get(Int32 bitNumber, out Int32 programNumber, out string errstring)

Python prototype

[programNumber, errstring] BG_Get (bitNumber)

Parameters

Input parameters

(Int32) bitNumber: bitNumber

Output parameters

(Int32_i) programNumber: programNumber

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous BG_Get command which is used to gets the stored program assignment for a digital I/O bit. Refer to the ESP302 Programmer's manual to get the command description.

BG

Syntax

C# prototype

int BG(Int32 bitNumber, Int32 programNumber, out string errstring)

Python prototype

[errstring] BG (bitNumber, programNumber)

Parameters

Input parameters

(Int32) bitNumber: bitNumber

(Int32) programNumber: programNumber

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous BG command which is used to assigns the execution of a stored program to a digital I/O bit. Refer to the ESP302 Programmer's manual to get the command description.

BK_Get

Syntax

C# prototype

int BK_Get(Int32 axisNumber, out Int32 bitNumber, out bool bitLevel, out string errstring)

Python prototype

[bitNumber, bitLevel, errstring] BK_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(Int32_i) bitNumber: bitNumber

(bool) bitLevel: bitLevel

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous BK_Get command which is used to gets an axis' motion inhibition assignment when a digital I/O bit flips. Refer to the ESP302 Programmer's manual to get the command description.

BK

Syntax

C# prototype

int BK(Int32 axisNumber, Int32 bitNumber, bool bitLevel, out string errstring)

Python prototype

[errstring] BK (axisNumber, bitNumber, bitLevel)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(Int32) bitNumber: bitNumber

(bool) bitLevel: bitLevel

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous BK command which is used to assigns an axis' motion inhibition when a digital I/O bit flips. Refer to the ESP302 Programmer's manual to get the command description.

BL_Get

Syntax

C# prototype

int BL_Get(Int32 axisNumber, out bool isEnabled, out string errstring)

Python prototype

[isEnabled, errstring] BL_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(bool) isEnabled: isEnabled

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous BL_Get command which is used to gets whether motion can be inhibited by the flipping of a digital I/O bit for an axis. Refer to the ESP302 Programmer's manual to get the command description.

BL

Syntax

C# prototype

int BL(Int32 axisNumber, Int32 doEnable, out string errstring)

Python prototype

[errstring] BL (axisNumber, doEnable)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(Int32) doEnable: doEnable

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous BL command which is used to sets whether motion can be inhibited by the flipping of a digital I/O bit for an axis. Refer to the ESP302 Programmer's manual to get the command description.

BM_Get

Syntax

C# prototype

int BM_Get(Int32 axisNumber, out Int32 bitNumber, out bool bitLevel, out string errstring)

Python prototype

[bitNumber, bitLevel, errstring] BM_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(Int32_i) bitNumber: bitNumber

(bool) bitLevel: bitLevel

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous BM_Get command which is used to get the motion status notification assignment to a digital I/O bit for an axis. Refer to the ESP302 Programmer's manual to get the command description.

BM

Syntax

C# prototype

int BM(Int32 axisNumber, Int32 bitNumber, bool bitLevel, out string errstring)

Python prototype

[errstring] BM (axisNumber, bitNumber, bitLevel)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(Int32) bitNumber: bitNumber

(bool) bitLevel: bitLevel

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous BM command which is used to assigns the setting of a digital I/O bit when the motion status changes for an axis. Refer to the ESP302 Programmer's manual to get the command description.

BN_Get

Syntax

C# prototype

int BN_Get(Int32 axisNumber, out bool isEnabled, out string errstring)

Python prototype

[isEnabled, errstring] BN_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(bool) isEnabled: isEnabled

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous BN_Get command which is used to sets whether the motion status change will update a digital I/O bit for an axis. Refer to the ESP302 Programmer's manual to get the command description.

BN

Syntax

C# prototype

int BN(Int32 axisNumber, bool doEnable, out string errstring)

Python prototype

[errstring] BN (axisNumber, doEnable)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(bool) doEnable: doEnable

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous BN command which is used to sets whether the motion status change will update a digital I/O bit for an axis. Refer to the ESP302 Programmer's manual to get the command description.

BO_Get

Syntax

C# prototype

int BO_Get(out Int32 portsDirection, out string errstring)

Python prototype

[portsDirection, errstring] BO_Get ()

Parameters

Input parameters

None

Output parameters

(Int32_i) portsDirection: portsDirection

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous BO_Get command which is used to gets the digital I/O ports A, B, C directions. Refer to the ESP302 Programmer's manual to get the command description.

BO

Syntax

C# prototype

int BO(Int32 portsDirection, out string errstring)

Python prototype

[errstring] BO (portsDirection)

Parameters

Input parameters

(Int32) portsDirection: portsDirection

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous BO command which is used to sets the digital I/O ports A, B, C directions. Refer to the ESP302 Programmer's manual to get the command description.

BP_Get

Syntax

C# prototype

int BP_Get(Int32 axisNumber, out Int32 bitNumberJogNegative, out Int32 bitNumberJogPositive, out string errstring)

Python prototype

[bitNumberJogNegative, bitNumberJogPositive, errstring] BP_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(Int32_i) bitNumberJogNegative: bitNumberJogNegative

(Int32_i) bitNumberJogPositive: bitNumberJogPositive

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous BP_Get command which is used to gets the jog mode control assignment digital I/O bits for an axis. Refer to the ESP302 Programmer's manual to get the command description.

BP

Syntax

C# prototype

int BP(Int32 axisNumber, Int32 bitNumberJogNegative, Int32 bitNumberJogPositive, out string errstring)

Python prototype

[errstring] BP (axisNumber, bitNumberJogNegative, bitNumberJogPositive)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(Int32) bitNumberJogNegative: bitNumberJogNegative

(Int32) bitNumberJogPositive: bitNumberJogPositive

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous BP command which is used to assigns a digital I/O bit to control motion in jog mode for an axis. Refer to the ESP302 Programmer's manual to get the command description.

BQ_Get

Syntax

C# prototype

int BQ_Get(Int32 axisNumber, out bool isEnabled, out string errstring)

Python prototype

[isEnabled, errstring] BQ_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(bool) isEnabled: isEnabled

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous BQ_Get command which is used to gets whether jog motion can be controlled by the flipping of a digital I/O bit for an axis. Refer to the ESP302 Programmer's manual to get the command description.

BQ

Syntax

C# prototype

int BQ(Int32 axisNumber, bool doEnable, out string errstring)

Python prototype

[errstring] BQ (axisNumber, doEnable)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(bool) doEnable: doEnable

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous BQ command which is used to sets whether jog motion can be controlled by the flipping of a digital I/O bit for an axis. Refer to the ESP302 Programmer's manual to get the command description.

CL_Get

Syntax

C# prototype

int CL_Get(Int32 axisNumber, out Int32 updateInterval, out string errstring)

Python prototype

[updateInterval, errstring] CL_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(Int32_i) updateInterval: updateInterval

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous CL_Get command which is used to gets the closed loop update interval for an axis. Refer to the ESP302 Programmer's manual to get the command description.

CO_Get

Syntax

C# prototype

int CO_Get(Int32 axisNumber, out float linearCompensationValue, out string errstring)

Python prototype

[linearCompensationValue, errstring] CO_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) linearCompensationValue: linearCompensationValue

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous CO_Get command which is used to gets the linear compensation value to compensate for positioning inaccuracies for an axis. Refer to the ESP302 Programmer's manual to get the command description.

CO

Syntax

C# prototype

int CO(Int32 axisNumber, float linearCompensationValue, out string errstring)

Python prototype

[errstring] CO (axisNumber, linearCompensationValue)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(float) linearCompensationValue: linearCompensationValue

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous CO command which is used to sets the linear compensation value to compensate for positioning inaccuracies for an axis. Refer to the ESP302 Programmer's manual to get the command description.

DC

Syntax

C# prototype

int DC(Int32 acquisitionMode, Int32 axisNumber, Int32 parameter3, Int32 dataCollected, Int32 acquisitionRate, Int32 sampleCount, out string errstring)

Python prototype

[errstring] DC (acquisitionMode, axisNumber, parameter3, dataCollected, acquisitionRate, sampleCount)

Parameters

Input parameters

(Int32) acquisitionMode: acquisitionMode

(Int32) axisNumber: axisNumber

(Int32) parameter3: parameter3

(Int32) dataCollected: dataCollected

(Int32) acquisitionRate: acquisitionRate

(Int32) sampleCount: sampleCount

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous DC command which is used to setup data acquisition. Refer to the ESP302 Programmer's manual to get the command description.

DD

Syntax

C# prototype

int DD(out string errstring)

Python prototype

[errstring] DD ()

Parameters

Input parameters

None

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous DD command which is used to gets the completion status of a data acquisition. Refer to the ESP302 Programmer's manual to get the command description.

DE

Syntax

C# prototype

int DE(Int32 doEnable, out string errstring)

Python prototype

[errstring] DE (doEnable)

Parameters

Input parameters

(Int32) doEnable: doEnable

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous DE command which is used to enable/disable data acquisition. Refer to the ESP302 Programmer's manual to get the command description.

DF

Syntax

C# prototype

int DF(out string errstring)

Python prototype

[errstring] DF ()

Parameters

Input parameters

None

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous DF command which is used to gets the current amount of collected samples in a data acquisition. Refer to the ESP302 Programmer's manual to get the command description.

DH_Get

Syntax

C# prototype

int DH_Get(Int32 axisNumber, out float positionValue, out string errstring)

Python prototype

[positionValue, errstring] DH_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) positionValue: positionValue

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous DH_Get command which is used to gets the position defined as the home position for an axis. Refer to the ESP302 Programmer's manual to get the command description.

DH

Syntax

C# prototype

int DH(Int32 axisNumber, float positionValue, out string errstring)

Python prototype

[errstring] DH (axisNumber, positionValue)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(float) positionValue: positionValue

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous DH command which is used to sets a position as the home position for an axis. Refer to the ESP302 Programmer's manual to get the command description.

DP_Get

Syntax

C# prototype

int DP_Get(Int32 axisNumber, out float desiredPosition, out string errstring)

Python prototype

[desiredPosition, errstring] DP_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) desiredPosition: desiredPosition

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous DP_Get command which is used to reads the desired position for an axis. Refer to the ESP302 Programmer's manual to get the command description.

DV_Get

Syntax

C# prototype

int DV_Get(Int32 axisNumber, out float desiredVelocity, out string errstring)

Python prototype

[desiredVelocity, errstring] DV_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) desiredVelocity: desiredVelocity

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous DV_Get command which is used to reads the desired velocity for an axis. Refer to the ESP302 Programmer's manual to get the command description.

EO_Get

Syntax

C# prototype

int EO_Get(out string programFile, out Int32 numberOfTimes, out string errstring)

Python prototype

[programFile, numberOfTimes, errstring] EO_Get ()

Parameters

Input parameters

None

Output parameters

(string) programFile: programFile

(Int32_i) numberOfTimes: numberOfTimes

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous EO_Get command which is used to gets the power-on autorun program file and execution count. Refer to the ESP302 Programmer's manual to get the command description.

EO

Syntax

C# prototype

int EO(Int32 programNumber, Int32 numberOfTimes, out string errstring)

Python prototype

[errstring] EO (programNumber, numberOfTimes)

Parameters

Input parameters

(Int32) programNumber: programNumber

(Int32) numberOfTimes: numberOfTimes

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous EO command which is used to sets the power-on autorun program number and execution count. Refer to the ESP302 Programmer's manual to get the command description.

EP

Syntax

C# prototype

int EP(Int32 programNumber, out string errstring)

Python prototype

[errstring] EP (programNumber)

Parameters

Input parameters

(Int32) programNumber: programNumber

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous EP command which is used to enters programming mode. Refer to the ESP302 Programmer's manual to get the command description.

EX

Syntax

C# prototype

int EX(Int32 numberOfTimes, string progFileName, string taskName, out string errstring)

Python prototype

[errstring] EX (numberOfTimes, progFileName, taskName)

Parameters

Input parameters

(Int32) numberOfTimes: numberOfTimes

(string) progFileName: progFileName

(string) taskName: taskName

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous EX command which is used to executes a program a given number of times. Refer to the ESP302 Programmer's manual to get the command description.

EX_Get

Syntax

C# prototype

int EX_Get(out Int32 numberOftasks, out string runningTasks, out string errstring)

Python prototype

[numberOftasks, runningTasks, errstring] EX_Get ()

Parameters

Input parameters

None

Output parameters

(Int32_i) numberOftasks: numberOftasks

(string) runningTasks: runningTasks

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous EX_Get command which is used to get list of current running program tasks. Refer to the ESP302 Programmer's manual to get the command description.

FE_Get

Syntax

C# prototype

int FE_Get(Int32 axisNumber, out float maxFollowingError, out string errstring)

Python prototype

[maxFollowingError, errstring] FE_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) maxFollowingError: maxFollowingError

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous FE_Get command which is used to gets the maximum allowed following error threshold for an axis. Refer to the ESP302 Programmer's manual to get the command description.

FE

Syntax

C# prototype

int FE(Int32 axisNumber, float maxFollowingError, out string errstring)

Python prototype

[errstring] FE (axisNumber, maxFollowingError)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(float) maxFollowingError: maxFollowingError

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous FE command which is used to sets the maximum allowed following error threshold for an axis. Refer to the ESP302 Programmer's manual to get the command description.

FP_Get

Syntax

C# prototype

int FP_Get(Int32 axisNumber, out Int32 displayResolution, out string errstring)

Python prototype

[displayResolution, errstring] FP_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(Int32_i) displayResolution: displayResolution

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous FP_Get command which is used to gets the display resolution of position information for an axis. Refer to the ESP302 Programmer's manual to get the command description.

FP

Syntax

C# prototype

int FP(Int32 axisNumber, Int32 displayResolution, out string errstring)

Python prototype

[errstring] FP (axisNumber, displayResolution)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(Int32) displayResolution: displayResolution

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous FP command which is used to sets the display resolution of position information for an axis. Refer to the ESP302 Programmer's manual to get the command description.

GR_Get

Syntax

C# prototype

int GR_Get(Int32 axisNumber, out float reductionRatio, out string errstring)

Python prototype

[reductionRatio, errstring] GR_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) reductionRatio: reductionRatio

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous GR_Get command which is used to gets the master-slave reduction ratio for a slave axis. Refer to the ESP302 Programmer's manual to get the command description.

GR

Syntax

C# prototype

int GR(Int32 axisNumber, float reductionRatio, out string errstring)

Python prototype

[errstring] GR (axisNumber, reductionRatio)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(float) reductionRatio: reductionRatio

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous GR command which is used to sets the master-slave reduction ratio for a slave axis. Refer to the ESP302 Programmer's manual to get the command description.

HA_Get

Syntax

C# prototype

int HA_Get(out float vectorAccelerationValue, out string errstring)

Python prototype

[vectorAccelerationValue, errstring] HA_Get ()

Parameters

Input parameters

None

Output parameters

(float) vectorAccelerationValue: vectorAccelerationValue

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous HA_Get command which is used to gets the vectorial acceleration/deceleration value for a group. Refer to the ESP302 Programmer's manual to get the command description.

HA

Syntax

C# prototype

int HA(float vectorAccelerationValue, out string errstring)

Python prototype

[errstring] HA (vectorAccelerationValue)

Parameters

Input parameters

(float) vectorAccelerationValue: vectorAccelerationValue

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous HA command which is used to sets the vectorial acceleration/deceleration value for a group. Refer to the ESP302 Programmer's manual to get the command description.

HB_Get

Syntax

C# prototype

int HB_Get(out Int32 currentElement, out Int32 totalElements, out string errstring)

Python prototype

[currentElement, totalElements, errstring] HB_Get ()

Parameters

Input parameters

None

Output parameters

(Int32_i) currentElement: currentElement

(Int32_i) totalElements: totalElements

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous HB_Get command which is used to gets current number of trajectory elements. Refer to the ESP302 Programmer's manual to get the command description.

HC_Get

Syntax

C# prototype

int HC_Get(out float arcCenterCoord1, out float arcCenterCoord2, out float arcSweepAngle, out string errstring)

Python prototype

[arcCenterCoord1, arcCenterCoord2, arcSweepAngle, errstring] HC_Get ()

Parameters

Input parameters

None

Output parameters

(float) arcCenterCoord1: arcCenterCoord1

(float) arcCenterCoord2: arcCenterCoord2

(float) arcSweepAngle: arcSweepAngle

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous HC_Get command which is used to reports the arc sweeping motion parameters for a group. Refer to the ESP302 Programmer's manual to get the command description.

HC

Syntax

C# prototype

int HC(float arcCenterCoord1, float arcCenterCoord2, float arcSweepAngle, out string errstring)

Python prototype

[errstring] HC (arcCenterCoord1, arcCenterCoord2, arcSweepAngle)

Parameters

Input parameters

(float) arcCenterCoord1: arcCenterCoord1

(float) arcCenterCoord2: arcCenterCoord2

(float) arcSweepAngle: arcSweepAngle

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous HC command which is used to initiates group motion along an arc. Refer to the ESP302 Programmer's manual to get the command description.

HE_Get

Syntax

C# prototype

int HE_Get(out float vectorDecelerationValue, out string errstring)

Python prototype

[vectorDecelerationValue, errstring] HE_Get ()

Parameters

Input parameters

None

Output parameters

(float) vectorDecelerationValue: vectorDecelerationValue

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous HE_Get command which is used to gets the vectorial emergency stop . Refer to the ESP302 Programmer's manual to get the command description.

HE

Syntax

C# prototype

int HE(float vectorDecelerationValue, out string errstring)

Python prototype

[errstring] HE (vectorDecelerationValue)

Parameters

Input parameters

(float) vectorDecelerationValue: vectorDecelerationValue

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous HE command which is used to sets the vectorial emergency stop .
Refer to the ESP302 Programmer's manual to get the command description.

HF_Get

Syntax

C# prototype

int HF_Get(out bool isPoweredOn, out string errstring)

Python prototype

[isPoweredOn, errstring] HF_Get ()

Parameters

Input parameters

None

Output parameters

(bool) isPoweredOn: isPoweredOn

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous HF_Get command which is used to query the power status of a group. Refer to the ESP302 Programmer's manual to get the command description.

HF

Syntax

C# prototype

int HF(out string errstring)

Python prototype

[errstring] HF ()

Parameters

Input parameters

None

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous HF command which is used to powers off all axes assigned to a group. Refer to the ESP302 Programmer's manual to get the command description.

HJ_Get

Syntax

C# prototype

int HJ_Get(out float vectorJerkValue, out string errstring)

Python prototype

[vectorJerkValue, errstring] HJ_Get ()

Parameters

Input parameters

None

Output parameters

(float) vectorJerkValue: vectorJerkValue

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous HJ_Get command which is used to gets the vectorial jerk . Refer to the ESP302 Programmer's manual to get the command description.

HL_Get

Syntax

C# prototype

int HL_Get(out float firstAxisTargetPos, out float[] nthAxisTargetPos, Int32 nbItems, out string errstring)

Python prototype

[firstAxisTargetPos, nthAxisTargetPos, errstring] HL_Get (nbItems)

Parameters

Input parameters

(Int32) nbItems: nbItems

None

Output parameters

(float) firstAxisTargetPos: firstAxisTargetPos

(float[]) nthAxisTargetPos: nthAxisTargetPos

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous HL_Get command which is used to reports the linear motion parameters for a group. Refer to the ESP302 Programmer's manual to get the command description.

HL

Syntax

C# prototype

int HL(float firstAxisTargetPos, float[] nthAxisTargetPos, Int32 nbItems, out string errstring)

Python prototype

[errstring] HL (firstAxisTargetPos, nthAxisTargetPos, nbItems)

Parameters

Input parameters

(float) firstAxisTargetPos: firstAxisTargetPos

(float[]) nthAxisTargetPos: nthAxisTargetPos

(Int32) nbItems: nbItems

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous HL command which is used to initiates group motion along a line. Refer to the ESP302 Programmer's manual to get the command description.

HN_Get

Syntax

C# prototype

int HN_Get(out string errstring)

Python prototype

[errstring] HN_Get ()

Parameters

Input parameters

None

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous HN_Get command which is used to reports the axes assigned to a group. Refer to the ESP302 Programmer's manual to get the command description.

HN

Syntax

C# prototype

int HN(Int32 firstPhysicalAxisNumber, Int32[] nthPhysicalAxisNumber, Int32 nbItems, out string errstring)

Python prototype

[errstring] HN (firstPhysicalAxisNumber, nthPhysicalAxisNumber, nbItems)

Parameters

Input parameters

(Int32) firstPhysicalAxisNumber: firstPhysicalAxisNumber

(Int32) nthPhysicalAxisNumber: nthPhysicalAxisNumber

(Int32) nbItems: nbItems

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous HN command which is used to create new group. Refer to the ESP302 Programmer's manual to get the command description.

HO_Get

Syntax

C# prototype

int HO_Get(out Int32 iPoweredOn, out string errstring)

Python prototype

[iPoweredOn, errstring] HO_Get ()

Parameters

Input parameters

None

Output parameters

(Int32_i) iPoweredOn: iPoweredOn

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous HO_Get command which is used to query the power status of a group. Refer to the ESP302 Programmer's manual to get the command description.

HO

Syntax

C# prototype

int HO(out string errstring)

Python prototype

[errstring] HO ()

Parameters

Input parameters

None

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous HO command which is used to powers on all axes assigned to a group. Refer to the ESP302 Programmer's manual to get the command description.

HP

Syntax

C# prototype

int HP(out float[] nthAxisCurrentPos, Int32 nbItems, out string errstring)

Python prototype

[nthAxisCurrentPos, errstring] HP (nbItems)

Parameters

Input parameters

(Int32) nbItems: nbItems

None

Output parameters

(float[]) nthAxisCurrentPos: nthAxisCurrentPos

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous HP command which is used to read the current position of all axes of a group. Refer to the ESP302 Programmer's manual to get the command description.

HQ_Get

Syntax

C# prototype

int HQ_Get(out Int32 currentLevel, out string errstring)

Python prototype

[currentLevel, errstring] HQ_Get ()

Parameters

Input parameters

None

Output parameters

(Int32_i) currentLevel: currentLevel

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous HQ_Get command which is used to gets a group's via point buffer's current level. Refer to the ESP302 Programmer's manual to get the command description.

HQ

Syntax

C# prototype

int HQ(Int32 desiredLevel, out string errstring)

Python prototype

[errstring] HQ (desiredLevel)

Parameters

Input parameters

(Int32) desiredLevel: desiredLevel

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous HQ command which is used to wait until the via point buffer of a group reaches the desired level. Refer to the ESP302 Programmer's manual to get the command description.

HS_Get

Syntax

C# prototype

int HS_Get(out bool isStopped, out string errstring)

Python prototype

[isStopped, errstring] HS_Get ()

Parameters

Input parameters

None

Output parameters

(bool) isStopped: isStopped

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous HS_Get command which is used to queries the motion stopped status of a group. Refer to the ESP302 Programmer's manual to get the command description.

HS

Syntax

C# prototype

int HS(out string errstring)

Python prototype

[errstring] HS ()

Parameters

Input parameters

None

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous HS command which is used to stops the motion of all axes assigned to a group. Refer to the ESP302 Programmer's manual to get the command description.

HV_Get

Syntax

C# prototype

int HV_Get(out float vectorVelocityValue, out string errstring)

Python prototype

[vectorVelocityValue, errstring] HV_Get ()

Parameters

Input parameters

None

Output parameters

(float) vectorVelocityValue: vectorVelocityValue

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous HV_Get command which is used to gets the vectorial velocity value for a group. Refer to the ESP302 Programmer's manual to get the command description.

HV

Syntax

C# prototype

int HV(float vectorVelocityValue, out string errstring)

Python prototype

[errstring] HV (vectorVelocityValue)

Parameters

Input parameters

(float) vectorVelocityValue: vectorVelocityValue

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous HV command which is used to sets the vectorial velocity value for a group. Refer to the ESP302 Programmer's manual to get the command description.

HW

Syntax

C# prototype

int HW(float milliSecondsToWaitAfterStop, out string errstring)

Python prototype

[errstring] HW (milliSecondsToWaitAfterStop)

Parameters

Input parameters

(float) milliSecondsToWaitAfterStop: milliSecondsToWaitAfterStop

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous HW command which is used to waits for group motion stop. Refer to the ESP302 Programmer's manual to get the command description.

HX

Syntax

C# prototype

int HX(out string errstring)

Python prototype

[errstring] HX ()

Parameters

Input parameters

None

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous HX command which is used to deletes the group and makes all of its axes available again for future assignments. Refer to the ESP302 Programmer's manual to get the command description.

HZ

Syntax

C# prototype

int HZ(out Int32 numberOfAxes, out string errstring)

Python prototype

[numberOfAxes, errstring] HZ ()

Parameters

Input parameters

None

Output parameters

(Int32_i) numberOfAxes: numberOfAxes

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous HZ command which is used to queries the number of axes in the group. Refer to the ESP302 Programmer's manual to get the command description.

ID

Syntax

C# prototype

int ID(Int32 axisNumber, out string stageModel, out string serialNumber, out string configurationName, out string errstring)

Python prototype

[stageModel, serialNumber, configurationName, errstring] ID (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(string) stageModel: stageModel

(string) serialNumber: serialNumber

(string) configurationName: configurationName

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous ID command which is used to reads a Newport ESP-compatible positioner . Refer to the ESP302 Programmer's manual to get the command description.

JH_Get

Syntax

C# prototype

int JH_Get(Int32 axisNumber, out float highSpeedValue, out string errstring)

Python prototype

[highSpeedValue, errstring] JH_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) highSpeedValue: highSpeedValue

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous JH_Get command which is used to gets the jog high speed value for an axis. Refer to the ESP302 Programmer's manual to get the command description.

JH

Syntax

C# prototype

int JH(Int32 axisNumber, float highSpeedValue, out string errstring)

Python prototype

[errstring] JH (axisNumber, highSpeedValue)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(float) highSpeedValue: highSpeedValue

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous JH command which is used to sets the jog high speed value for an axis. Refer to the ESP302 Programmer's manual to get the command description.

JK_Get

Syntax

C# prototype

int JK_Get(Int32 axisNumber, out float jerkValue, out string errstring)

Python prototype

[jerkValue, errstring] JK_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) jerkValue: jerkValue

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous JK_Get command which is used to gets the jerk . Refer to the ESP302 Programmer's manual to get the command description.

JW_Get

Syntax

C# prototype

int JW_Get(Int32 axisNumber, out float lowSpeedValue, out string errstring)

Python prototype

[lowSpeedValue, errstring] JW_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) lowSpeedValue: lowSpeedValue

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous JW_Get command which is used to gets the jog low speed value for an axis. Refer to the ESP302 Programmer's manual to get the command description.

JW

Syntax

C# prototype

int JW(Int32 axisNumber, float lowSpeedValue, out string errstring)

Python prototype

[errstring] JW (axisNumber, lowSpeedValue)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(float) lowSpeedValue: lowSpeedValue

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous JW command which is used to sets the jog low speed value for an axis. Refer to the ESP302 Programmer's manual to get the command description.

KD_Get

Syntax

C# prototype

int KD_Get(Int32 axisNumber, out float derivativeGainFactor, out string errstring)

Python prototype

[derivativeGainFactor, errstring] KD_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) derivativeGainFactor: derivativeGainFactor

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous KD_Get command which is used to gets the derivative gain factor . Refer to the ESP302 Programmer's manual to get the command description.

KD

Syntax

C# prototype

int KD(Int32 axisNumber, float derivativeGainFactor, out string errstring)

Python prototype

[errstring] KD (axisNumber, derivativeGainFactor)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(float) derivativeGainFactor: derivativeGainFactor

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous KD command which is used to sets the derivative gain factor . Refer to the ESP302 Programmer's manual to get the command description.

KF_Get

Syntax

C# prototype

int KF_Get(Int32 axisNumber, out float derivativeCutOffFrequency, out string errstring)

Python prototype

[derivativeCutOffFrequency, errstring] KF_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) derivativeCutOffFrequency: derivativeCutOffFrequency

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous KF_Get command which is used to gets the derivative cut-off frequency of the PID closed loop for an axis. Refer to the ESP302 Programmer's manual to get the command description.

KF

Syntax

C# prototype

int KF(Int32 axisNumber, float derivativeCutOffFrequency, out string errstring)

Python prototype

[errstring] KF (axisNumber, derivativeCutOffFrequency)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(float) derivativeCutOffFrequency: derivativeCutOffFrequency

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous KF command which is used to sets the derivative cut-off frequency of the PID closed loop for an axis. Refer to the ESP302 Programmer's manual to get the command description.

KI_Get

Syntax

C# prototype

int KI_Get(Int32 axisNumber, out float integralGainFactor, out string errstring)

Python prototype

[integralGainFactor, errstring] KI_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) integralGainFactor: integralGainFactor

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous KI_Get command which is used to gets the integral gain factor . Refer to the ESP302 Programmer's manual to get the command description.

KI

Syntax

C# prototype

int KI(Int32 axisNumber, float integralGainFactor, out string errstring)

Python prototype

[errstring] KI (axisNumber, integralGainFactor)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(float) integralGainFactor: integralGainFactor

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous KI command which is used to sets the integral gain factor . Refer to the ESP302 Programmer's manual to get the command description.

KP_Get

Syntax

C# prototype

int KP_Get(Int32 axisNumber, out float proportionalGainFactor, out string errstring)

Python prototype

[proportionalGainFactor, errstring] KP_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) proportionalGainFactor: proportionalGainFactor

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous KP_Get command which is used to gets the proportional gain factor . Refer to the ESP302 Programmer's manual to get the command description.

KP

Syntax

C# prototype

int KP(Int32 axisNumber, float proportionalGainFactor, out string errstring)

Python prototype

[errstring] KP (axisNumber, proportionalGainFactor)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(float) proportionalGainFactor: proportionalGainFactor

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous KP command which is used to sets the proportional gain factor . Refer to the ESP302 Programmer's manual to get the command description.

KS_Get

Syntax

C# prototype

int KS_Get(Int32 axisNumber, out float integralGainSaturationLevel, out string errstring)

Python prototype

[integralGainSaturationLevel, errstring] KS_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) integralGainSaturationLevel: integralGainSaturationLevel

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous KS_Get command which is used to gets the integral gain saturation level of the PID closed loop for an axis. Refer to the ESP302 Programmer's manual to get the command description.

KS

Syntax

C# prototype

int KS(Int32 axisNumber, float integralGainSaturationLevel, out string errstring)

Python prototype

[errstring] KS (axisNumber, integralGainSaturationLevel)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(float) integralGainSaturationLevel: integralGainSaturationLevel

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous KS command which is used to sets the integral gain saturation level of the PID closed loop for an axis. Refer to the ESP302 Programmer's manual to get the command description.

KT_Get

Syntax

C# prototype

int KT_Get(Int32 axisNumber, out float integrationTime, out string errstring)

Python prototype

[integrationTime, errstring] KT_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) integrationTime: integrationTime

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous KT_Get command which is used to gets the integration time of the PID closed loop for an axis. Refer to the ESP302 Programmer's manual to get the command description.

KT

Syntax

C# prototype

int KT(Int32 axisNumber, float integrationTime, out string errstring)

Python prototype

[errstring] KT (axisNumber, integrationTime)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(float) integrationTime: integrationTime

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous KT command which is used to sets the integration time of the PID closed loop for an axis. Refer to the ESP302 Programmer's manual to get the command description.

LC_Get

Syntax

C# prototype

int LC_Get(out Int32 lockLevel, out string errstring)

Python prototype

[lockLevel, errstring] LC_Get ()

Parameters

Input parameters

None

Output parameters

(Int32_i) lockLevel: lockLevel

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous LC_Get command which is used to gets the lock status of the controller's keyboard buttons/touch screen input. Refer to the ESP302 Programmer's manual to get the command description.

LC

Syntax

C# prototype

int LC(Int32 lockLevel, out string errstring)

Python prototype

[errstring] LC (lockLevel)

Parameters

Input parameters

(Int32) lockLevel: lockLevel

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous LC command which is used to locks/unlocks the controller's keyboard buttons/touch screen input. Refer to the ESP302 Programmer's manual to get the command description.

LP

Syntax

C# prototype

int LP(Int32 programNumber, out string programListing, out string errstring)

Python prototype

[programListing, errstring] LP (programNumber)

Parameters

Input parameters

(Int32) programNumber: programNumber

Output parameters

(string) programListing: programListing

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous LP command which is used to retrieves the listing of a program. Refer to the ESP302 Programmer's manual to get the command description.

MD_Get

Syntax

C# prototype

int MD_Get(Int32 axisNumber, out bool isMotionDone, out string errstring)

Python prototype

[isMotionDone, errstring] MD_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(bool) isMotionDone: isMotionDone

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous MD_Get command which is used to queries the motion completion status for an axis. Refer to the ESP302 Programmer's manual to get the command description.

MF_Get

Syntax

C# prototype

int MF_Get(Int32 axisNumber, out bool isPoweredOn, out string errstring)

Python prototype

[isPoweredOn, errstring] MF_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(bool) isPoweredOn: isPoweredOn

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous MF_Get command which is used to queries the power status of an axis motor. Refer to the ESP302 Programmer's manual to get the command description.

MF

Syntax

C# prototype

int MF(Int32 axisNumber, out string errstring)

Python prototype

[errstring] MF (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous MF command which is used to powers off an axis motor. Refer to the ESP302 Programmer's manual to get the command description.

MO_Get

Syntax

C# prototype

int MO_Get(Int32 axisNumber, out bool isPoweredOn, out string errstring)

Python prototype

[isPoweredOn, errstring] MO_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(bool) isPoweredOn: isPoweredOn

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous MO_Get command which is used to queries the power status of an axis motor. Refer to the ESP302 Programmer's manual to get the command description.

MO

Syntax

C# prototype

int MO(Int32 axisNumber, out string errstring)

Python prototype

[errstring] MO (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous MO command which is used to powers on an axis motor. Refer to the ESP302 Programmer's manual to get the command description.

MT_Get

Syntax

C# prototype

int MT_Get(Int32 axisNumber, out bool isMotionDone, out string errstring)

Python prototype

[isMotionDone, errstring] MT_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(bool) isMotionDone: isMotionDone

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous MT_Get command which is used to queries the motion completion status for an axis. Refer to the ESP302 Programmer's manual to get the command description.

MT

Syntax

C# prototype

int MT(Int32 axisNumber, string directionSign, out string errstring)

Python prototype

[errstring] MT (axisNumber, directionSign)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(string) directionSign: directionSign

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous MT command which is used to moves an axis to its hardware travel limit, positive or negative. Refer to the ESP302 Programmer's manual to get the command description.

MV_Get

Syntax

C# prototype

int MV_Get(Int32 axisNumber, out bool isMotionDone, out string errstring)

Python prototype

[isMotionDone, errstring] MV_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(bool) isMotionDone: isMotionDone

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous MV_Get command which is used to queries the motion completion status for an axis. Refer to the ESP302 Programmer's manual to get the command description.

MV

Syntax

C# prototype

int MV(Int32 axisNumber, string directionSign, out string errstring)

Python prototype

[errstring] MV (axisNumber, directionSign)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(string) directionSign: directionSign

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous MV command which is used to moves an axis indefinitely towards a direction, positive or negative. Refer to the ESP302 Programmer's manual to get the command description.

MZ_Get

Syntax

C# prototype

int MZ_Get(Int32 axisNumber, out bool isMotionDone, out string errstring)

Python prototype

[isMotionDone, errstring] MZ_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(bool) isMotionDone: isMotionDone

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous MZ_Get command which is used to queries the motion completion status for an axis. Refer to the ESP302 Programmer's manual to get the command description.

MZ

Syntax

C# prototype

int MZ(Int32 axisNumber, string directionSign, out string errstring)

Python prototype

[errstring] MZ (axisNumber, directionSign)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(string) directionSign: directionSign

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous MZ command which is used to moves an axis to its nearest index, positive or negative. Refer to the ESP302 Programmer's manual to get the command description.

OH_Get

Syntax

C# prototype

int OH_Get(Int32 axisNumber, out float highSpeedValue, out string errstring)

Python prototype

[highSpeedValue, errstring] OH_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) highSpeedValue: highSpeedValue

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous OH_Get command which is used to gets the home search high speed value for an axis. Refer to the ESP302 Programmer's manual to get the command description.

OH

Syntax

C# prototype

int OH(Int32 axisNumber, float highSpeedValue, out string errstring)

Python prototype

[errstring] OH (axisNumber, highSpeedValue)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(float) highSpeedValue: highSpeedValue

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous OH command which is used to sets the home search high speed value for an axis. Refer to the ESP302 Programmer's manual to get the command description.

OL_Get

Syntax

C# prototype

int OL_Get(Int32 axisNumber, out float lowSpeedValue, out string errstring)

Python prototype

[lowSpeedValue, errstring] OL_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) lowSpeedValue: lowSpeedValue

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous OL_Get command which is used to gets the home search low speed value for an axis. Refer to the ESP302 Programmer's manual to get the command description.

OL

Syntax

C# prototype

int OL(Int32 axisNumber, float lowSpeedValue, out string errstring)

Python prototype

[errstring] OL (axisNumber, lowSpeedValue)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(float) lowSpeedValue: lowSpeedValue

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous OL command which is used to sets the home search low speed value for an axis. Refer to the ESP302 Programmer's manual to get the command description.

OM_Get

Syntax

C# prototype

int OM_Get(Int32 axisNumber, out Int32 homeSearchMode, out string errstring)

Python prototype

[homeSearchMode, errstring] OM_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(Int32_i) homeSearchMode: homeSearchMode

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous OM_Get command which is used to gets the home search mode for an axis. Refer to the ESP302 Programmer's manual to get the command description.

OM

Syntax

C# prototype

int OM(Int32 axisNumber, Int32 homeSearchMode, out string errstring)

Python prototype

[errstring] OM (axisNumber, homeSearchMode)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(Int32) homeSearchMode: homeSearchMode

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous OM command which is used to sets the home search mode for an axis. Refer to the ESP302 Programmer's manual to get the command description.

OR

Syntax

C# prototype

int OR(Int32 axisNumber, Int32 homeSearchMode, out string errstring)

Python prototype

[errstring] OR (axisNumber, homeSearchMode)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(Int32) homeSearchMode: homeSearchMode

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous OR command which is used to initiates the home search for an axis with a specific mode. Refer to the ESP302 Programmer's manual to get the command description.

OR

Syntax

C# prototype

int OR(Int32 axisNumber, out string errstring)

Python prototype

[errstring] OR (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous OR command which is used to initiates the home search for an axis with current mode. Refer to the ESP302 Programmer's manual to get the command description.

PA_Get

Syntax

C# prototype

int PA_Get(Int32 axisNumber, out float absolutePosition, out string errstring)

Python prototype

[absolutePosition, errstring] PA_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) absolutePosition: absolutePosition

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous PA_Get command which is used to gets the absolute position for an axis. Refer to the ESP302 Programmer's manual to get the command description.

PA

Syntax

C# prototype

int PA(Int32 axisNumber, float absolutePosition, out string errstring)

Python prototype

[errstring] PA (axisNumber, absolutePosition)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(float) absolutePosition: absolutePosition

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous PA command which is used to moves an axis to an absolute position. Refer to the ESP302 Programmer's manual to get the command description.

PH

Syntax

C# prototype

int PH(out Int32 statusRegister1, out Int32 statusRegister2, out string errstring)

Python prototype

[statusRegister1, statusRegister2, errstring] PH ()

Parameters

Input parameters

None

Output parameters

(Int32_i) statusRegister1: statusRegister1

(Int32_i) statusRegister2: statusRegister2

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous PH command which is used to gets the hardware status for all axes. Refer to the ESP302 Programmer's manual to get the command description.

PR

Syntax

C# prototype

int PR(Int32 axisNumber, float relativePosition, out string errstring)

Python prototype

[errstring] PR (axisNumber, relativePosition)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(float) relativePosition: relativePosition

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous PR command which is used to moves an axis to a relative position. Refer to the ESP302 Programmer's manual to get the command description.

QI_Get

Syntax

C# prototype

int QI_Get(Int32 axisNumber, out float motorCurrent, out string errstring)

Python prototype

[motorCurrent, errstring] QI_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) motorCurrent: motorCurrent

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous QI_Get command which is used to gets the maximum motor current for an axis. Refer to the ESP302 Programmer's manual to get the command description.

QM_Get

Syntax

C# prototype

int QM_Get(Int32 axisNumber, out Int32 motorType, out string errstring)

Python prototype

[motorType, errstring] QM_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(Int32_i) motorType: motorType

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous QM_Get command which is used to gets the motor type for an axis. Refer to the ESP302 Programmer's manual to get the command description.

QP

Syntax

C# prototype

int QP(out string errstring)

Python prototype

[errstring] QP ()

Parameters

Input parameters

None

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous QP command which is used to quit programming mode. Refer to the ESP302 Programmer's manual to get the command description.

QR_Get

Syntax

C# prototype

int QR_Get(Int32 axisNumber, out Int32 afterMilliseconds, out float newCurrentPercentage, out string errstring)

Python prototype

[afterMilliseconds, newCurrentPercentage, errstring] QR_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(Int32_i) afterMilliseconds: afterMilliseconds

(float) newCurrentPercentage: newCurrentPercentage

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous QR_Get command which is used to gets the motor torque reduction parameters for an axis. Refer to the ESP302 Programmer's manual to get the command description.

QV_Get

Syntax

C# prototype

int QV_Get(Int32 axisNumber, out float averageVoltage, out string errstring)

Python prototype

[averageVoltage, errstring] QV_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) averageVoltage: averageVoltage

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous QV_Get command which is used to gets the average motor voltage for an axis. Refer to the ESP302 Programmer's manual to get the command description.

RQ

Syntax

C# prototype

int RQ(Int32 interruptNumber, out string errstring)

Python prototype

[errstring] RQ (interruptNumber)

Parameters

Input parameters

(Int32) interruptNumber: interruptNumber

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous RQ command which is used to generate an interrupt service request to the host computer. Refer to the ESP302 Programmer's manual to get the command description.

RS

Syntax

C# prototype

int RS(out string errstring)

Python prototype

[errstring] RS ()

Parameters

Input parameters

None

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous RS command which is used to performs a hardware reset of the controller. Refer to the ESP302 Programmer's manual to get the command description.

SA_Get

Syntax

C# prototype

int SA_Get(out Int32 deviceAddress, out string errstring)

Python prototype

[deviceAddress, errstring] SA_Get ()

Parameters

Input parameters

None

Output parameters

(Int32_i) deviceAddress: deviceAddress

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous SA_Get command which is used to gets the device address of a controller. Refer to the ESP302 Programmer's manual to get the command description.

SA

Syntax

C# prototype

int SA(Int32 deviceAddress, out string errstring)

Python prototype

[errstring] SA (deviceAddress)

Parameters

Input parameters

(Int32) deviceAddress: deviceAddress

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous SA command which is used to gets the device address of a controller. Refer to the ESP302 Programmer's manual to get the command description.

SB_Get

Syntax

C# prototype

int SB_Get(out Int32 registerState, out string errstring)

Python prototype

[registerState, errstring] SB_Get ()

Parameters

Input parameters

None

Output parameters

(Int32_i) registerState: registerState

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous SB_Get command which is used to gets the digital I/O ports A and B bit states. Refer to the ESP302 Programmer's manual to get the command description.

SB

Syntax

C# prototype

int SB(Int32 registerState, out string errstring)

Python prototype

[errstring] SB (registerState)

Parameters

Input parameters

(Int32) registerState: registerState

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous SB command which is used to sets the digital I/O ports A and B bit states. Refer to the ESP302 Programmer's manual to get the command description.

SH_Get

Syntax

C# prototype

int SH_Get(Int32 axisNumber, out float homePresetPosition, out string errstring)

Python prototype

[homePresetPosition, errstring] SH_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) homePresetPosition: homePresetPosition

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous SH_Get command which is used to gets the home preset position for an axis. Refer to the ESP302 Programmer's manual to get the command description.

SH

Syntax

C# prototype

int SH(Int32 axisNumber, float homePresetPosition, out string errstring)

Python prototype

[errstring] SH (axisNumber, homePresetPosition)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(float) homePresetPosition: homePresetPosition

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous SH command which is used to sets the home preset position for an axis. Refer to the ESP302 Programmer's manual to get the command description.

SI_Get

Syntax

C# prototype

int SI_Get(out Int32 intervalMilliseconds, out string errstring)

Python prototype

[intervalMilliseconds, errstring] SI_Get ()

Parameters

Input parameters

None

Output parameters

(Int32_i) intervalMilliseconds: intervalMilliseconds

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous SI_Get command which is used to gets the master-slave jog velocity update interval for slave axis. Refer to the ESP302 Programmer's manual to get the command description.

SI

Syntax

C# prototype

int SI(Int32 intervalMilliseconds, out string errstring)

Python prototype

[errstring] SI (intervalMilliseconds)

Parameters

Input parameters

(Int32) intervalMilliseconds: intervalMilliseconds

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous SI command which is used to sets the master-slave jog velocity update interval for slave axis. Refer to the ESP302 Programmer's manual to get the command description.

SL_Get

Syntax

C# prototype

int SL_Get(Int32 axisNumber, out float negativeSoftwareLimit, out string errstring)

Python prototype

[negativeSoftwareLimit, errstring] SL_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) negativeSoftwareLimit: negativeSoftwareLimit

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous SL_Get command which is used to gets the left . Refer to the ESP302 Programmer's manual to get the command description.

SL

Syntax

C# prototype

int SL(Int32 axisNumber, float negativeSoftwareLimit, out string errstring)

Python prototype

[errstring] SL (axisNumber, negativeSoftwareLimit)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(float) negativeSoftwareLimit: negativeSoftwareLimit

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous SL command which is used to sets the left . Refer to the ESP302 Programmer's manual to get the command description.

SN_Get

Syntax

C# prototype

int SN_Get(Int32 axisNumber, out Int32 displacementUnit, out string errstring)

Python prototype

[displacementUnit, errstring] SN_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(Int32_i) displacementUnit: displacementUnit

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous SN_Get command which is used to gets the displacement unit for an axis. Refer to the ESP302 Programmer's manual to get the command description.

SN

Syntax

C# prototype

int SN(Int32 axisNumber, Int32 displacementUnit, out string errstring)

Python prototype

[errstring] SN (axisNumber, displacementUnit)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(Int32) displacementUnit: displacementUnit

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous SN command which is used to sets the displacement unit for an axis. Refer to the ESP302 Programmer's manual to get the command description.

SR_Get

Syntax

C# prototype

int SR_Get(Int32 axisNumber, out float positiveSoftwareLimit, out string errstring)

Python prototype

[positiveSoftwareLimit, errstring] SR_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) positiveSoftwareLimit: positiveSoftwareLimit

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous SR_Get command which is used to gets the right . Refer to the ESP302 Programmer's manual to get the command description.

SR

Syntax

C# prototype

int SR(Int32 axisNumber, float positiveSoftwareLimit, out string errstring)

Python prototype

[errstring] SR (axisNumber, positiveSoftwareLimit)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(float) positiveSoftwareLimit: positiveSoftwareLimit

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous SR command which is used to sets the right . Refer to the ESP302 Programmer's manual to get the command description.

SS_Get

Syntax

C# prototype

int SS_Get(Int32 slaveAxisNumber, out Int32 masterAxisNumber, out string errstring)

Python prototype

[masterAxisNumber, errstring] SS_Get (slaveAxisNumber)

Parameters

Input parameters

(Int32) slaveAxisNumber: slaveAxisNumber

Output parameters

(Int32_i) masterAxisNumber: masterAxisNumber

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous SS_Get command which is used to gets the master axis number of a slave axis. Refer to the ESP302 Programmer's manual to get the command description.

SS

Syntax

C# prototype

int SS(Int32 slaveAxisNumber, Int32 masterAxisNumber, out string errstring)

Python prototype

[errstring] SS (slaveAxisNumber, masterAxisNumber)

Parameters

Input parameters

(Int32) slaveAxisNumber: slaveAxisNumber

(Int32) masterAxisNumber: masterAxisNumber

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous SS command which is used to sets up a master-slave relationship between two axes. Refer to the ESP302 Programmer's manual to get the command description.

ST

Syntax

C# prototype

int ST(Int32 axisNumber, out string errstring)

Python prototype

[errstring] ST (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous ST command which is used to stops motion using programmed deceleration on an axis. Refer to the ESP302 Programmer's manual to get the command description.

SU_Get

Syntax

C# prototype

int SU_Get(Int32 axisNumber, out float encoderResolution, out string errstring)

Python prototype

[encoderResolution, errstring] SU_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) encoderResolution: encoderResolution

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous SU_Get command which is used to gets the encoder resolution for an axis. Refer to the ESP302 Programmer's manual to get the command description.

SU

Syntax

C# prototype

int SU(Int32 axisNumber, float encoderResolution, out string errstring)

Python prototype

[errstring] SU (axisNumber, encoderResolution)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(float) encoderResolution: encoderResolution

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous SU command which is used to sets the encoder resolution for an axis. Refer to the ESP302 Programmer's manual to get the command description.

TB_Get

Syntax

C# prototype

int TB_Get(out Int32 errorCodeESP, out Int32 timeStamp, out string errorMessage, out string errstring)

Python prototype

[errorCodeESP, timeStamp, errorMessage, errstring] TB_Get ()

Parameters

Input parameters

None

Output parameters

(Int32_i) errorCodeESP: errorCodeESP

(Int32_i) timeStamp: timeStamp

(string) errorMessage: errorMessage

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous TB_Get command which is used to reads the oldest known error code, timestamp and associated message . Refer to the ESP302 Programmer's manual to get the command description.

TB

Syntax

C# prototype

int TB(Int32 errorCodeESP, out string errorMessage, out string errstring)

Python prototype

[errorMessage, errstring] TB (errorCodeESP)

Parameters

Input parameters

(Int32) errorCodeESP: errorCodeESP

Output parameters

(string) errorMessage: errorMessage

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous TB command which is used to gets the error message associated with an error code. Refer to the ESP302 Programmer's manual to get the command description.

TE_Get

Syntax

C# prototype

int TE_Get(out Int32 errorCodeESP, out string errstring)

Python prototype

[errorCodeESP, errstring] TE_Get ()

Parameters

Input parameters

None

Output parameters

(Int32_i) errorCodeESP: errorCodeESP

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous TE_Get command which is used to reads the oldest known error code . Refer to the ESP302 Programmer's manual to get the command description.

TE

Syntax

C# prototype

int TE(Int32 queryType, out string errstring)

Python prototype

[errstring] TE (queryType)

Parameters

Input parameters

(Int32) queryType: queryType

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous TE command which is used to [queryType = 1] reads the oldest known error code without removing it from the error FIFO, [queryType = 2] gets the number of errors currently in the FIFO. Refer to the ESP302 Programmer's manual to get the command description.

TP

Syntax

C# prototype

int TP(Int32 axisNumber, out float currentPosition, out string errstring)

Python prototype

[currentPosition, errstring] TP (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) currentPosition: currentPosition

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous TP command which is used to gets the actual . Refer to the ESP302 Programmer's manual to get the command description.

TS

Syntax

C# prototype

int TS(Int32 axisNumberOrZeroForAll, out string statusData, out string errstring)

Python prototype

[statusData, errstring] TS (axisNumberOrZeroForAll)

Parameters

Input parameters

(Int32) axisNumberOrZeroForAll: axisNumberOrZeroForAll

Output parameters

(string) statusData: statusData

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous TS command which is used to queries the controller's status register for one axis or for all and returns it as two or one binary byte. Refer to the ESP302 Programmer's manual to get the command description.

TS1

Syntax

C# prototype

int TS1(Int32 axisNumber, out string twoStatusBytes, out string errstring)

Python prototype

[twoStatusBytes, errstring] TS1 (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(string) twoStatusBytes: twoStatusBytes

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous TS1 command which is used to gets the DRV11 status register of an axis and returns it as two binary byte. Refer to the ESP302 Programmer's manual to get the command description.

TV

Syntax

C# prototype

int TV(Int32 axisNumber, out float currentVelocity, out string errstring)

Python prototype

[currentVelocity, errstring] TV (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) currentVelocity: currentVelocity

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous TV command which is used to gets the actual . Refer to the ESP302 Programmer's manual to get the command description.

TX

Syntax

C# prototype

int TX(out string oneStatusByte, out string errstring)

Python prototype

[oneStatusByte, errstring] TX ()

Parameters

Input parameters

None

Output parameters

(string) oneStatusByte: oneStatusByte

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous TX command which is used to queries the controller's activity register and returns it as one binary byte. Refer to the ESP302 Programmer's manual to get the command description.

TX1

Syntax

C# prototype

int TX1(out string threeStatusByte, out string errstring)

Python prototype

[threeStatusByte, errstring] TX1 ()

Parameters

Input parameters

None

Output parameters

(string) threeStatusByte: threeStatusByte

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous TX1 command which is used to queries the controller's status register and returns it as three binary bytes. Refer to the ESP302 Programmer's manual to get the command description.

UF

Syntax

C# prototype

int UF(Int32 axisNumber, out string errstring)

Python prototype

[errstring] UF (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous UF command which is used to updates the servo filter for a single axis or all axes . Refer to the ESP302 Programmer's manual to get the command description.

UH

Syntax

C# prototype

int UH(Int32 digitalIOBitNumber, out string errstring)

Python prototype

[errstring] UH (digitalIOBitNumber)

Parameters

Input parameters

(Int32) digitalIOBitNumber: digitalIOBitNumber

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous UH command which is used to waits for digital I/O bit high. Refer to the ESP302 Programmer's manual to get the command description.

UL

Syntax

C# prototype

int UL(Int32 digitalIOBitNumber, out string errstring)

Python prototype

[errstring] UL (digitalIOBitNumber)

Parameters

Input parameters

(Int32) digitalIOBitNumber: digitalIOBitNumber

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous UL command which is used to waits for digital I/O bit low. Refer to the ESP302 Programmer's manual to get the command description.

VA_Get

Syntax

C# prototype

int VA_Get(Int32 axisNumber, out float velocityValue, out string errstring)

Python prototype

[velocityValue, errstring] VA_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) velocityValue: velocityValue

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous VA_Get command which is used to gets the velocity for an axis. Refer to the ESP302 Programmer's manual to get the command description.

VA

Syntax

C# prototype

int VA(Int32 axisNumber, float velocityValue, out string errstring)

Python prototype

[errstring] VA (axisNumber, velocityValue)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(float) velocityValue: velocityValue

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous VA command which is used to sets the velocity for an axis. Refer to the ESP302 Programmer's manual to get the command description.

VE_Get

Syntax

C# prototype

int VE_Get(out string versionString, out string errstring)

Python prototype

[versionString, errstring] VE_Get ()

Parameters

Input parameters

None

Output parameters

(string) versionString: versionString

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous VE_Get command which is used to gets the controller Snapshot version. Refer to the ESP302 Programmer's manual to get the command description.

VE1_Get

Syntax

C# prototype

int VE1_Get(out string versionString, out string errstring)

Python prototype

[versionString, errstring] VE1_Get ()

Parameters

Input parameters

None

Output parameters

(string) versionString: versionString

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous VE1_Get command which is used to gets the controller Motionkernel version. Refer to the ESP302 Programmer's manual to get the command description.

VE2_Get

Syntax

C# prototype

int VE2_Get(out string versionString, out string errstring)

Python prototype

[versionString, errstring] VE2_Get ()

Parameters

Input parameters

None

Output parameters

(string) versionString: versionString

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous VE2_Get command which is used to gets the controller Host version. Refer to the ESP302 Programmer's manual to get the command description.

VE3_Get

Syntax

C# prototype

int VE3_Get(out string versionString, out string errstring)

Python prototype

[versionString, errstring] VE3_Get ()

Parameters

Input parameters

None

Output parameters

(string) versionString: versionString

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous VE3_Get command which is used to gets the controller FrontPanel version. Refer to the ESP302 Programmer's manual to get the command description.

VE4_Get

Syntax

C# prototype

int VE4_Get(out string versionString, out string errstring)

Python prototype

[versionString, errstring] VE4_Get ()

Parameters

Input parameters

None

Output parameters

(string) versionString: versionString

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous VE4_Get command which is used to gets the controller Web version. Refer to the ESP302 Programmer's manual to get the command description.

VF_Get

Syntax

C# prototype

int VF_Get(Int32 axisNumber, out float velocityFeedForwardGain, out string errstring)

Python prototype

[velocityFeedForwardGain, errstring] VF_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) velocityFeedForwardGain: velocityFeedForwardGain

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous VF_Get command which is used to gets the velocity feed-forward gain factor . Refer to the ESP302 Programmer's manual to get the command description.

VF

Syntax

C# prototype

int VF(Int32 axisNumber, float velocityFeedForwardGain, out string errstring)

Python prototype

[errstring] VF (axisNumber, velocityFeedForwardGain)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(float) velocityFeedForwardGain: velocityFeedForwardGain

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous VF command which is used to sets the velocity feed-forward gain factor . Refer to the ESP302 Programmer's manual to get the command description.

VU_Get

Syntax

C# prototype

int VU_Get(Int32 axisNumber, out float velocityValue, out string errstring)

Python prototype

[velocityValue, errstring] VU_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(float) velocityValue: velocityValue

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous VU_Get command which is used to gets the maximum velocity for an axis. Refer to the ESP302 Programmer's manual to get the command description.

WP

Syntax

C# prototype

int WP(Int32 axisNumber, float positionValue, out string errstring)

Python prototype

[errstring] WP (axisNumber, positionValue)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(float) positionValue: positionValue

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous WP command which is used to waits for an axis to reach a position. Refer to the ESP302 Programmer's manual to get the command description.

WS

Syntax

C# prototype

int WS(Int32 axisNumber, Int32 msecDelayAfterStop, out string errstring)

Python prototype

[errstring] WS (axisNumber, msecDelayAfterStop)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(Int32) msecDelayAfterStop: msecDelayAfterStop

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous WS command which is used to waits for motion to stop on an axis, possibly with an additional wait time. Refer to the ESP302 Programmer's manual to get the command description.

WT

Syntax

C# prototype

int WT(Int32 msecDelay, out string errstring)

Python prototype

[errstring] WT (msecDelay)

Parameters

Input parameters

(Int32) msecDelay: msecDelay

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous WT command which is used to waits for the specified delay in milliseconds. Refer to the ESP302 Programmer's manual to get the command description.

XM

Syntax

C# prototype

int XM(out string availableMemoryString, out string errstring)

Python prototype

[availableMemoryString, errstring] XM ()

Parameters

Input parameters

None

Output parameters

(string) availableMemoryString: availableMemoryString

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous XM command which is used to gets a report about the available memory on the controller. Refer to the ESP302 Programmer's manual to get the command description.

XX

Syntax

C# prototype

int XX(Int32 programNumberOrZeroToPurge, out string errstring)

Python prototype

[errstring] XX (programNumberOrZeroToPurge)

Parameters

Input parameters

(Int32) programNumberOrZeroToPurge: programNumberOrZeroToPurge

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous XX command which is used to erases a program from non-volatile memory . Refer to the ESP302 Programmer's manual to get the command description.

ZE_Get

Syntax

C# prototype

int ZE_Get(Int32 axisNumber, out Int32 eStopConfiguration, out string errstring)

Python prototype

[eStopConfiguration, errstring] ZE_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(Int32_i) eStopConfiguration: eStopConfiguration

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous ZE_Get command which is used to gets the emergency stop . Refer to the ESP302 Programmer's manual to get the command description.

ZE

Syntax

C# prototype

int ZE(Int32 axisNumber, Int32 eStopConfiguration, out string errstring)

Python prototype

[errstring] ZE (axisNumber, eStopConfiguration)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(Int32) eStopConfiguration: eStopConfiguration

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous ZE command which is used to sets the emergency stop . Refer to the ESP302 Programmer's manual to get the command description.

ZF_Get

Syntax

C# prototype

int ZF_Get(Int32 axisNumber, out Int32 followingErrorConfiguration, out string errstring)

Python prototype

[followingErrorConfiguration, errstring] ZF_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(Int32_i) followingErrorConfiguration: followingErrorConfiguration

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous ZF_Get command which is used to gets the following error fault checking and event handling configuration for an axis. Refer to the ESP302 Programmer's manual to get the command description.

ZF

Syntax

C# prototype

int ZF(Int32 axisNumber, Int32 followingErrorConfiguration, out string errstring)

Python prototype

[errstring] ZF (axisNumber, followingErrorConfiguration)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(Int32) followingErrorConfiguration: followingErrorConfiguration

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous ZF command which is used to sets the following error fault checking and event handling configuration for an axis. Refer to the ESP302 Programmer's manual to get the command description.

ZH_Get

Syntax

C# prototype

int ZH_Get(Int32 axisNumber, out Int32 hardwareLimitConfiguration, out string errstring)

Python prototype

[hardwareLimitConfiguration, errstring] ZH_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(Int32_i) hardwareLimitConfiguration: hardwareLimitConfiguration

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous ZH_Get command which is used to gets the hardware limit checking, polarity and event handling configuration for an axis. Refer to the ESP302 Programmer's manual to get the command description.

ZH

Syntax

C# prototype

int ZH(Int32 axisNumber, Int32 hardwareLimitConfiguration, out string errstring)

Python prototype

[errstring] ZH (axisNumber, hardwareLimitConfiguration)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(Int32) hardwareLimitConfiguration: hardwareLimitConfiguration

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous ZH command which is used to sets the hardware limit checking, polarity and event handling configuration for an axis. Refer to the ESP302 Programmer's manual to get the command description.

ZS_Get

Syntax

C# prototype

int ZS_Get(Int32 axisNumber, out Int32 softwareLimitConfiguration, out string errstring)

Python prototype

[softwareLimitConfiguration, errstring] ZS_Get (axisNumber)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

Output parameters

(Int32_i) softwareLimitConfiguration: softwareLimitConfiguration

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous ZS_Get command which is used to gets the software limit checking and event handling configuration for an axis. Refer to the ESP302 Programmer's manual to get the command description.

ZS

Syntax

C# prototype

int ZS(Int32 axisNumber, Int32 softwareLimitConfiguration, out string errstring)

Python prototype

[errstring] ZS (axisNumber, softwareLimitConfiguration)

Parameters

Input parameters

(Int32) axisNumber: axisNumber

(Int32) softwareLimitConfiguration: softwareLimitConfiguration

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous ZS command which is used to sets the software limit checking and event handling configuration for an axis. Refer to the ESP302 Programmer's manual to get the command description.

ZU

Syntax

C# prototype

int ZU(out Int32 espSystemConfiguration, out string errstring)

Python prototype

[espSystemConfiguration, errstring] ZU ()

Parameters

Input parameters

None

Output parameters

(Int32_i) espSystemConfiguration: espSystemConfiguration

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous ZU command which is used to gets the ESP system stage/driver configuration. Refer to the ESP302 Programmer's manual to get the command description.

ZZ_Get

Syntax

C# prototype

int ZZ_Get(out Int32 systemConfiguration, out string errstring)

Python prototype

[systemConfiguration, errstring] ZZ_Get ()

Parameters

Input parameters

None

Output parameters

(Int32_i) systemConfiguration: systemConfiguration

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous ZZ_Get command which is used to gets the system fault checking, event handling and general setup for all axes. Refer to the ESP302 Programmer's manual to get the command description.

ZZ

Syntax

C# prototype

int ZZ(Int32 systemConfiguration, out string errstring)

Python prototype

[errstring] ZZ (systemConfiguration)

Parameters

Input parameters

(Int32) systemConfiguration: systemConfiguration

Output parameters

(string) errString: The failure reason

Return

(int) error code: 0 in success and -1 on failure

Description

This function is used to process synchronous ZZ command which is used to sets the system fault checking, event handling and general setup for all axes. Refer to the ESP302 Programmer's manual to get the command description.