



HXP

Hexapod Motion Controller



Command Interface Manual

Intaller Pack Version #30002

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Original instructions.

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Hexapod Motion Controller HXP

1.0 Introduction

1.1 Purpose

The purpose of this document is to provide the method syntax of each command to communicate with the HXP device exposed in assembly Newport.HXP.CommandInterface.dll.

1.2 Overview

Command Interface DLL is a generic name that refers to a DLL used to communicate with an instrument. Typically this DLL exposes all the commands the instrument supports. These commands are exposed as function calls of the Command Interface DLL.

Newport.HXP.CommandInterface.dll is the assembly used for communicating with HXP instrument. This assembly gets installed when HXP applet is installed.

NOTE

Each function name is defined with the command code “AA”.
For each command function, refer to the HXP programmer’s manual.

1.3 Location

Newport.HXP.CommandInterface.dll is located at
C:\Program Files
(x86)\Newport\MotionControl\HXP\Bin\Newport.HXP.CommandInterface.dll

1.4 Possible Uses of Newport.HXP.CommandInterface.dll

Newport.HXP.CommandInterface.dll is used by HXP applet for communicating with HXP instrument. The same DLL can be used as a reusable software component for creating Python script or for creating LabVIEW VIs.

2.0 Command Interface

2.1 Constructor

Syntax

HXP()

Description

The constructor is used to create an instance of the HXP device.

2.2 Functions

2.2.1 OpenInstrument

Syntax

C# prototype

int OpenInstrument (string Address, int port)

Python prototype

[Return] OpenInstrument (Address, Port)

Parameter

Input parameters

None

Output parameters

(string) Address: TCP IP address controller

(int) Port: TCP IP port

Return

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

Description

This function is used to open the communication with the controller. A socket is created and the TCP IP connection is established. Refer to the HXP Programmer's manual to get the command description.

2.2.2 CloseInstrument

Syntax

C# prototype

int CloseInstrument ()

Python prototype

[Return] CloseInstrument ()

Parameter

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 communication with the controller. The current socket is deleted and the TCP IP connection is closed.

Refer to HXP Programmer's manual to get the command description.

2.2.3 ControllerMotionKernelTimeLoadGet**Syntax***C# prototype*

```
int ControllerMotionKernelTimeLoadGet(out double CPUTotalLoadRatio, out double
CPUCorrectorLoadRatio, out double CPUProfilerLoadRatio, out double
CPUServitudesLoadRatio, out string errstring)
```

Python prototype

```
[CPUTotalLoadRatio, CPUCorrectorLoadRatio, CPUProfilerLoadRatio,
CPUServitudesLoadRatio, errstring] ControllerMotionKernelTimeLoadGet ()
```

Parameters*Input parameters*

None

Output parameters

(double) CPUTotalLoadRatio: CPUTotalLoadRatio

(double) CPUCorrectorLoadRatio: CPUCorrectorLoadRatio

(double) CPUProfilerLoadRatio: CPUProfilerLoadRatio

(double) CPUServitudesLoadRatio: CPUServitudesLoadRatio

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous ControllerMotionKernelTimeLoadGet command which is used to Get controller motion kernel time load. Refer to the XPS Programmer's manual to get the command description.

2.2.4 ElapsedTimeGet**Syntax***C# prototype*

```
int ElapsedTimeGet(out double ElapsedTime, out string errstring)
```

Python prototype

```
[ElapsedTime, errstring] ElapsedTimeGet ()
```

Parameters*Input parameters*

None

Output parameters

(double) ElapsedTime: ElapsedTime

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous ElapsedTimeGet command which is used to Return elapsed time from controller power on. Refer to the XPS Programmer's manual to get the command description.

2.2.5 ErrorStringGet**Syntax***C# prototype*

int ErrorStringGet(Int32 ErrorCode, out string ErrorString, out string errstring)

Python prototype

[ErrorString, errstring] ErrorStringGet (ErrorCode)

Parameters*Input parameters*

(Int32) ErrorCode: ErrorCode

Output parameters

(string) ErrorString: ErrorString

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous ErrorStringGet command which is used to Return the error string corresponding to the error code. Refer to the XPS Programmer's manual to get the command description.

2.2.6 FirmwareVersionGet**Syntax***C# prototype*

int FirmwareVersionGet(out string Version, out string errstring)

Python prototype

[Version, errstring] FirmwareVersionGet ()

Parameters*Input parameters*

None

Output parameters

(string) Version: Version

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous FirmwareVersionGet command which is used to Return firmware version. Refer to the XPS Programmer's manual to get the command description.

2.2.7 TCLScriptExecute**Syntax***C# prototype*

int TCLScriptExecute(string TCLFileName, string TaskName, string ParametersList, out string errstring)

Python prototype

[errstring] TCLScriptExecute (TCLFileName, TaskName, ParametersList)

Parameters*Input parameters*

(string) TCLFileName: TCLFileName

(string) TaskName: TaskName

(string) ParametersList: ParametersList

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 TCLScriptExecute command which is used to Execute a TCL script from a TCL file. Refer to the XPS Programmer's manual to get the command description.

2.2.8 TCLScriptExecuteAndWait**Syntax***C# prototype*

int TCLScriptExecuteAndWait(string TCLFileName, string TaskName, string InputParametersList, out string OutputParametersList, out string errstring)

Python prototype

[OutputParametersList, errstring] TCLScriptExecuteAndWait (TCLFileName, TaskName, InputParametersList)

Parameters*Input parameters*

(string) TCLFileName: TCLFileName

(string) TaskName: TaskName

(string) InputParametersList: InputParametersList

Output parameters

(string) OutputParametersList: OutputParametersList

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous TCLScriptExecuteAndWait command which is used to Execute a TCL script from a TCL file and wait the end of execution to return. Refer to the XPS Programmer's manual to get the command description.

2.2.9 TCLScriptKill**Syntax***C# prototype*

int TCLScriptKill(string TaskName, out string errstring)

Python prototype

[errstring] TCLScriptKill (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 TCLScriptKill command which is used to Kill TCL Task. Refer to the XPS Programmer's manual to get the command description.

2.2.10 TCLScriptKillAll**Syntax***C# prototype*

int TCLScriptKillAll(out string errstring)

Python prototype

[errstring] TCLScriptKillAll ()

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 TCLScriptKillAll command which is used to Kill all TCL Tasks. Refer to the XPS Programmer's manual to get the command description.

2.2.11 TimerGet**Syntax***C# prototype*

int TimerGet(string TimerName, out Int32 FrequencyTicks, out string errstring)

Python prototype

[FrequencyTicks, errstring] TimerGet (TimerName)

Parameters*Input parameters*

(string) TimerName: TimerName

Output parameters

(Int32_i) FrequencyTicks: FrequencyTicks

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous TimerGet command which is used to Get a timer. Refer to the XPS Programmer's manual to get the command description.

2.2.12 TimerSet**Syntax***C# prototype*

int TimerSet(string TimerName, Int32 FrequencyTicks, out string errstring)

Python prototype

[errstring] TimerSet (TimerName, FrequencyTicks)

Parameters*Input parameters*

(string) TimerName: TimerName

(Int32) FrequencyTicks: FrequencyTicks

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 TimerSet command which is used to Set a timer. Refer to the XPS Programmer's manual to get the command description.

2.2.13 Reboot**Syntax***C# prototype*

int Reboot(out string errstring)

Python prototype

[errstring] Reboot ()

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 Reboot command which is used to Reboot the controller. Refer to the XPS Programmer's manual to get the command description.

2.2.14 Login**Syntax***C# prototype*

int Login(string Name, string Password, out string errstring)

Python prototype

[errstring] Login (Name, Password)

Parameters*Input parameters*

(string) Name: Name

(string) Password: Password

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 Login command which is used to Log in. Refer to the XPS Programmer's manual to get the command description.

2.2.15 CloseAllOtherSockets**Syntax***C# prototype*

```
int CloseAllOtherSockets( out string errstring)
```

Python prototype

```
[errstring] CloseAllOtherSockets ()
```

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 CloseAllOtherSockets command which is used to Close all socket beside the one used to send this command. Refer to the XPS Programmer's manual to get the command description.

2.2.16 EventAdd**Syntax***C# prototype*

```
int EventAdd(string PositionerName, string EventName, string EventParameter, string ActionName, string ActionParameter1, string ActionParameter2, string ActionParameter3, out string errstring)
```

Python prototype

```
[errstring] EventAdd (PositionerName, EventName, EventParameter, ActionName, ActionParameter1, ActionParameter2, ActionParameter3)
```

Parameters*Input parameters*

(string) PositionerName: PositionerName

(string) EventName: EventName

(string) EventParameter: EventParameter

(string) ActionName: ActionName

(string) ActionParameter1: ActionParameter1

(string) ActionParameter2: ActionParameter2

(string) ActionParameter3: ActionParameter3

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 EventAdd command which is used to **** OBSOLETE **** Add an event. Refer to the XPS Programmer's manual to get the command description.

2.2.17 EventGet**Syntax***C# prototype*

int EventGet(string PositionerName, out string EventsAndActionsList, out string errstring)

Python prototype

[EventsAndActionsList, errstring] EventGet (PositionerName)

Parameters*Input parameters*

(string) PositionerName: PositionerName

Output parameters

(string) EventsAndActionsList: EventsAndActionsList

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous EventGet command which is used to **** OBSOLETE **** Read events and actions list. Refer to the XPS Programmer's manual to get the command description.

2.2.18 EventRemove**Syntax***C# prototype*

int EventRemove(string PositionerName, string EventName, string EventParameter, out string errstring)

Python prototype

[errstring] EventRemove (PositionerName, EventName, EventParameter)

Parameters*Input parameters*

(string) PositionerName: PositionerName

(string) EventName: EventName

(string) EventParameter: EventParameter

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 EventRemove command which is used to **** OBSOLETE **** Delete an event. Refer to the XPS Programmer's manual to get the command description.

2.2.19 EventWait**Syntax***C# prototype*

```
int EventWait(string PositionerName, string EventName, string EventParameter, out
string errstring)
```

Python prototype

```
[errstring] EventWait (PositionerName, EventName, EventParameter)
```

Parameters*Input parameters*

(string) PositionerName: PositionerName

(string) EventName: EventName

(string) EventParameter: EventParameter

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 EventWait command which is used to **** OBSOLETE **** Wait an event. Refer to the XPS Programmer's manual to get the command description.

2.2.20 EventExtendedConfigurationTriggerSet**Syntax***C# prototype*

```
int EventExtendedConfigurationTriggerSet(string[] ExtendedEventName, string[]
EventParameter1, string[] EventParameter2, string[] EventParameter3, string[]
EventParameter4, out string errstring)
```

Python prototype

```
[errstring] EventExtendedConfigurationTriggerSet (ExtendedEventName,
EventParameter1, EventParameter2, EventParameter3, EventParameter4)
```

Parameters*Input parameters*

(string[]) ExtendedEventName: ExtendedEventName

(string[]) EventParameter1: EventParameter1

(string[]) EventParameter2: EventParameter2

(string[]) EventParameter3: EventParameter3

(string[]) EventParameter4: EventParameter4

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 EventExtendedConfigurationTriggerSet command which is used to Configure one or several events. Refer to the XPS Programmer's manual to get the command description.

2.2.21 EventExtendedConfigurationTriggerGet**Syntax***C# prototype*

```
int EventExtendedConfigurationTriggerGet(out string EventTriggerConfiguration, out string errstring)
```

Python prototype

```
[EventTriggerConfiguration, errstring] EventExtendedConfigurationTriggerGet ()
```

Parameters*Input parameters*

None

Output parameters

(string) EventTriggerConfiguration: EventTriggerConfiguration

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous EventExtendedConfigurationTriggerGet command which is used to Read the event configuration. Refer to the XPS Programmer's manual to get the command description.

2.2.22 EventExtendedConfigurationActionSet**Syntax***C# prototype*

```
int EventExtendedConfigurationActionSet(string[] ExtendedActionName, string[] ActionParameter1, string[] ActionParameter2, string[] ActionParameter3, string[] ActionParameter4, out string errstring)
```

Python prototype

[errstring] EventExtendedConfigurationActionSet (ExtendedActionName, ActionParameter1, ActionParameter2, ActionParameter3, ActionParameter4)

Parameters*Input parameters*

(string[]) ExtendedActionName: ExtendedActionName

(string[]) ActionParameter1: ActionParameter1

(string[]) ActionParameter2: ActionParameter2

(string[]) ActionParameter3: ActionParameter3

(string[]) ActionParameter4: ActionParameter4

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 EventExtendedConfigurationActionSet command which is used to Configure one or several actions. Refer to the XPS Programmer's manual to get the command description.

2.2.23 EventExtendedConfigurationActionGet**Syntax***C# prototype*

int EventExtendedConfigurationActionGet(out string ActionConfiguration, out string errstring)

Python prototype

[ActionConfiguration, errstring] EventExtendedConfigurationActionGet ()

Parameters*Input parameters*

None

Output parameters

(string) ActionConfiguration: ActionConfiguration

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous EventExtendedConfigurationActionGet command which is used to Read the action configuration. Refer to the XPS Programmer's manual to get the command description.

2.2.24 EventExtendedStart

Syntax

C# prototype

```
int EventExtendedStart(out Int32 ID, out string errstring)
```

Python prototype

```
[ID, errstring] EventExtendedStart ()
```

Parameters

Input parameters

None

Output parameters

(Int32_i) ID: ID

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous EventExtendedStart command which is used to Launch the last event and action configuration and return an ID. Refer to the XPS Programmer's manual to get the command description.

2.2.25 EventExtendedAllGet

Syntax

C# prototype

```
int EventExtendedAllGet(out string EventActionConfigurations, out string errstring)
```

Python prototype

```
[EventActionConfigurations, errstring] EventExtendedAllGet ()
```

Parameters

Input parameters

None

Output parameters

(string) EventActionConfigurations: EventActionConfigurations

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous EventExtendedAllGet command which is used to Read all event and action configurations. Refer to the XPS Programmer's manual to get the command description.

2.2.26 EventExtendedGet

Syntax

C# prototype

```
int EventExtendedGet(Int32 ID, out string EventTriggerConfiguration, out string ActionConfiguration, out string errstring)
```

Python prototype

```
[EventTriggerConfiguration, ActionConfiguration, errstring] EventExtendedGet (ID)
```

Parameters

Input parameters

(Int32) ID: ID

Output parameters

(string) EventTriggerConfiguration: EventTriggerConfiguration

(string) ActionConfiguration: ActionConfiguration

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous EventExtendedGet command which is used to Read the event and action configuration defined by ID. Refer to the XPS Programmer's manual to get the command description.

2.2.27 EventExtendedRemove

Syntax

C# prototype

```
int EventExtendedRemove(Int32 ID, out string errstring)
```

Python prototype

```
[errstring] EventExtendedRemove (ID)
```

Parameters

Input parameters

(Int32) ID: ID

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 EventExtendedRemove command which is used to Remove the event and action configuration defined by ID. Refer to the XPS Programmer's manual to get the command description.

2.2.28 EventExtendedWait

Syntax

C# prototype

```
int EventExtendedWait( out string errstring)
```

Python prototype

```
[errstring] EventExtendedWait ()
```

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 EventExtendedWait command which is used to Wait events from the last event configuration. Refer to the XPS Programmer's manual to get the command description.

2.2.29 GatheringConfigurationGet

Syntax

C# prototype

```
int GatheringConfigurationGet(out string Type, out string errstring)
```

Python prototype

```
[Type, errstring] GatheringConfigurationGet ()
```

Parameters

Input parameters

None

Output parameters

(string) Type: Type

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous GatheringConfigurationGet command which is used to Read different mnemonic type. Refer to the XPS Programmer's manual to get the command description.

2.2.30 GatheringConfigurationSet

Syntax

C# prototype

int GatheringConfigurationSet(string[] Type, out string errstring)

Python prototype

[errstring] GatheringConfigurationSet (Type)

Parameters

Input parameters

(string[]) Type: Type

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 GatheringConfigurationSet command which is used to Configuration acquisition. Refer to the XPS Programmer's manual to get the command description.

2.2.31 GatheringCurrentNumberGet

Syntax

C# prototype

int GatheringCurrentNumberGet(out Int32 CurrentNumber, out Int32 MaximumSamplesNumber, out string errstring)

Python prototype

[CurrentNumber, MaximumSamplesNumber, errstring] GatheringCurrentNumberGet ()

Parameters

Input parameters

None

Output parameters

(Int32_i) CurrentNumber: CurrentNumber

(Int32_i) MaximumSamplesNumber: MaximumSamplesNumber

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous GatheringCurrentNumberGet command which is used to Maximum number of samples and current number during acquisition. Refer to the XPS Programmer's manual to get the command description.

2.2.32 GatheringStopAndSave

Syntax

C# prototype

```
int GatheringStopAndSave( out string errstring)
```

Python prototype

```
[errstring] GatheringStopAndSave ()
```

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 GatheringStopAndSave command which is used to Stop acquisition and save data. Refer to the XPS Programmer's manual to get the command description.

2.2.33 GatheringDataAcquire

Syntax

C# prototype

```
int GatheringDataAcquire( out string errstring)
```

Python prototype

```
[errstring] GatheringDataAcquire ()
```

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 GatheringDataAcquire command which is used to Acquire a configured data. Refer to the XPS Programmer's manual to get the command description.

2.2.34 GatheringDataGet

Syntax

C# prototype

```
int GatheringDataGet(Int32 IndexPoint, out string DataBufferLine, out string errstring)
```

Python prototype

```
[DataBufferLine, errstring] GatheringDataGet (IndexPoint)
```

Parameters

Input parameters

(Int32) IndexPoint: IndexPoint

Output parameters

(string) DataBufferLine: DataBufferLine

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous GatheringDataGet command which is used to Get a data line from gathering buffer. Refer to the XPS Programmer's manual to get the command description.

2.2.35 GatheringDataMultipleLinesGet

Syntax

C# prototype

```
int GatheringDataMultipleLinesGet(Int32 IndexPoint, Int32 NumberOfLines, out string DataBufferLine, out string errstring)
```

Python prototype

```
[DataBufferLine, errstring] GatheringDataMultipleLinesGet (IndexPoint, NumberOfLines)
```

Parameters

Input parameters

(Int32) IndexPoint: IndexPoint

(Int32) NumberOfLines: NumberOfLines

Output parameters

(string) DataBufferLine: DataBufferLine

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous GatheringDataMultipleLinesGet command which is used to Get multiple data lines from gathering buffer. Refer to the XPS Programmer's manual to get the command description.

2.2.36 GatheringReset

Syntax

C# prototype

```
int GatheringReset( out string errstring)
```

Python prototype

```
[errstring] GatheringReset ()
```

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 GatheringReset command which is used to Empty the gathered data in memory to start new gathering from scratch. Refer to the XPS Programmer's manual to get the command description.

2.2.37 GatheringRun

Syntax

C# prototype

```
int GatheringRun(Int32 DataNumber, Int32 Divisor, out string errstring)
```

Python prototype

```
[errstring] GatheringRun (DataNumber, Divisor)
```

Parameters

Input parameters

(Int32) DataNumber: DataNumber

(Int32) Divisor: Divisor

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 GatheringRun command which is used to Start a new gathering. Refer to the XPS Programmer's manual to get the command description.

2.2.38 GatheringStop

Syntax

C# prototype

```
int GatheringStop( out string errstring)
```

Python prototype

```
[errstring] GatheringStop ()
```

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 GatheringStop command which is used to Stop the data gathering . Refer to the XPS Programmer's manual to get the command description.

2.2.39 GatheringExternalConfigurationSet

Syntax

C# prototype

```
int GatheringExternalConfigurationSet(string[] Type, out string errstring)
```

Python prototype

```
[errstring] GatheringExternalConfigurationSet (Type)
```

Parameters

Input parameters

(string[]) Type: Type

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 GatheringExternalConfigurationSet command which is used to Configuration acquisition. Refer to the XPS Programmer's manual to get the command description.

2.2.40 GatheringExternalConfigurationGet

Syntax

C# prototype

```
int GatheringExternalConfigurationGet(out string Type, out string errstring)
```

Python prototype

```
[Type, errstring] GatheringExternalConfigurationGet ()
```

Parameters

Input parameters

None

Output parameters

(string) Type: Type

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous GatheringExternalConfigurationGet command which is used to Read different mnemonic type. Refer to the XPS Programmer's manual to get the command description.

2.2.41 GatheringExternalCurrentNumberGet

Syntax

C# prototype

```
int GatheringExternalCurrentNumberGet(out Int32 CurrentNumber, out Int32  
MaximumSamplesNumber, out string errstring)
```

Python prototype

```
[CurrentNumber, MaximumSamplesNumber, errstring]  
GatheringExternalCurrentNumberGet ()
```

Parameters

Input parameters

None

Output parameters

(Int32_i) CurrentNumber: CurrentNumber

(Int32_i) MaximumSamplesNumber: MaximumSamplesNumber

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous GatheringExternalCurrentNumberGet command which is used to Maximum number of samples and current number during acquisition. Refer to the XPS Programmer's manual to get the command description.

2.2.42 GatheringExternalStopAndSave

Syntax

C# prototype

```
int GatheringExternalStopAndSave( out string errstring)
```

Python prototype

```
[errstring] GatheringExternalStopAndSave ()
```

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 GatheringExternalStopAndSave command which is used to Stop acquisition and save data. Refer to the XPS Programmer's manual to get the command description.

2.2.43 GlobalArrayGet

Syntax

C# prototype

```
int GlobalArrayGet(Int32 Number, out string ValueString, out string errstring)
```

Python prototype

```
[ValueString, errstring] GlobalArrayGet (Number)
```

Parameters

Input parameters

(Int32) Number: Number

Output parameters

(string) ValueString: ValueString

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous GlobalArrayGet command which is used to Get global array value. Refer to the XPS Programmer's manual to get the command description.

2.2.44 GlobalArraySet

Syntax

C# prototype

```
int GlobalArraySet(Int32 Number, string ValueString, out string errstring)
```

Python prototype

```
[errstring] GlobalArraySet (Number, ValueString)
```

Parameters

Input parameters

(Int32) Number: Number

(string) ValueString: ValueString

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 GlobalArraySet command which is used to Set global array value. Refer to the XPS Programmer's manual to get the command description.

2.2.45 DoubleGlobalArrayGet

Syntax

C# prototype

```
int DoubleGlobalArrayGet(Int32 Number, out double DoubleValue, out string errstring)
```

Python prototype

```
[DoubleValue, errstring] DoubleGlobalArrayGet (Number)
```

Parameters

Input parameters

(Int32) Number: Number

Output parameters

(double) DoubleValue: DoubleValue

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous DoubleGlobalArrayGet command which is used to Get double global array value. Refer to the XPS Programmer's manual to get the command description.

2.2.46 DoubleGlobalArraySet

Syntax

C# prototype

```
int DoubleGlobalArraySet(Int32 Number, double DoubleValue, out string errstring)
```

Python prototype

```
[errstring] DoubleGlobalArraySet (Number, DoubleValue)
```

Parameters

Input parameters

(Int32) Number: Number

(double) DoubleValue: DoubleValue

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 DoubleGlobalArraySet command which is used to Set double global array value. Refer to the XPS Programmer's manual to get the command description.

2.2.47 GPIOAnalogGet

Syntax

C# prototype

```
int GPIOAnalogGet(string[] GPIOName, out double[] AnalogValue, out string errstring)
```

Python prototype

```
[AnalogValue, errstring] GPIOAnalogGet (GPIOName)
```

Parameters

Input parameters

(string[]) GPIOName: GPIOName

Output parameters

(double[]) AnalogValue: AnalogValue

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous GPIOAnalogGet command which is used to Read analog input or analog output for one or few input. Refer to the XPS Programmer's manual to get the command description.

2.2.48 GPIOAnalogSet

Syntax

C# prototype

```
int GPIOAnalogSet(string[] GPIOName, double[] AnalogOutputValue, out string  
errstring)
```

Python prototype

```
[errstring] GPIOAnalogSet (GPIOName, AnalogOutputValue)
```

Parameters

Input parameters

(string[]) GPIOName: GPIOName

(double[]) AnalogOutputValue: AnalogOutputValue

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 GPIOAnalogSet command which is used to Set analog output for one or few output. Refer to the XPS Programmer's manual to get the command description.

2.2.49 GPIOAnalogGainGet

Syntax

C# prototype

```
int GPIOAnalogGainGet(string[] GPIOName, out Int32[] AnalogInputGainValue, out  
string errstring)
```

Python prototype

```
[AnalogInputGainValue, errstring] GPIOAnalogGainGet (GPIOName)
```

Parameters

Input parameters

(string[]) GPIOName: GPIOName

Output parameters

(Int32_i[]) AnalogInputGainValue: AnalogInputGainValue

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous GPIOAnalogGainGet command which is used to Read analog input gain . Refer to the XPS Programmer's manual to get the command description.

2.2.50 GPIOAnalogGainSet

Syntax

C# prototype

```
int GPIOAnalogGainSet(string[] GPIOName, Int32[] AnalogInputGainValue, out string errstring)
```

Python prototype

```
[errstring] GPIOAnalogGainSet (GPIOName, AnalogInputGainValue)
```

Parameters

Input parameters

(string[]) GPIOName: GPIOName

(Int32) AnalogInputGainValue: AnalogInputGainValue

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 GPIOAnalogGainSet command which is used to Set analog input gain . Refer to the XPS Programmer's manual to get the command description.

2.2.51 GPIODigitalGet

Syntax

C# prototype

```
int GPIODigitalGet(string GPIOName, out UInt16 DigitalValue, out string errstring)
```

Python prototype

```
[DigitalValue, errstring] GPIODigitalGet (GPIOName)
```

Parameters

Input parameters

(string) GPIOName: GPIOName

Output parameters

(UInt16) DigitalValue: DigitalValue

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous GPIODigitalGet command which is used to Read digital output or digital input . Refer to the XPS Programmer's manual to get the command description.

2.2.52 GPIODigitalSet

Syntax

C# prototype

```
int GPIODigitalSet(string GPIOName, UInt16 Mask, UInt16 DigitalOutputValue, out string errstring)
```

Python prototype

```
[errstring] GPIODigitalSet (GPIOName, Mask, DigitalOutputValue)
```

Parameters

Input parameters

(string) GPIOName: GPIOName

(UInt16) Mask: Mask

(UInt16) DigitalOutputValue: DigitalOutputValue

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 GPIODigitalSet command which is used to Set Digital Output for one or few output TTL. Refer to the XPS Programmer's manual to get the command description.

2.2.53 GroupCorrectorOutputGet

Syntax

C# prototype

```
int GroupCorrectorOutputGet(string GroupName, out double[] CorrectorOutput, Int32 nbItems, out string errstring)
```

Python prototype

```
[CorrectorOutput, errstring] GroupCorrectorOutputGet (GroupName, nbItems)
```

Parameters

Input parameters

(string) GroupName: GroupName

(Int32) nbItems: nbItems

Output parameters

(double[]) CorrectorOutput: CorrectorOutput

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous GroupCorrectorOutputGet command which is used to Return corrector outputs. Refer to the XPS Programmer's manual to get the command description.

2.2.54 GroupHomeSearch

Syntax

C# prototype

```
int GroupHomeSearch(string GroupName, out string errstring)
```

Python prototype

```
[errstring] GroupHomeSearch (GroupName)
```

Parameters

Input parameters

(string) GroupName: GroupName

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 GroupHomeSearch command which is used to Start home search sequence. Refer to the XPS Programmer's manual to get the command description.

2.2.55 GroupHomeSearchAndRelativeMove

Syntax

C# prototype

```
int GroupHomeSearchAndRelativeMove(string GroupName, double[]  
TargetDisplacement, Int32 nbItems, out string errstring)
```

Python prototype

```
[errstring] GroupHomeSearchAndRelativeMove (GroupName, TargetDisplacement,  
nbItems)
```

Parameters

Input parameters

(string) GroupName: GroupName

(double[]) TargetDisplacement: TargetDisplacement

(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 GroupHomeSearchAndRelativeMove command which is used to Start home search sequence and execute a displacement. Refer to the XPS Programmer's manual to get the command description.

2.2.56 GroupReadyAtPosition

Syntax

C# prototype

```
int GroupReadyAtPosition(string GroupName, double EncoderPosition1, double EncoderPosition2, double EncoderPosition3, double EncoderPosition4, double EncoderPosition5, double EncoderPosition6, out string errstring)
```

Python prototype

```
[errstring] GroupReadyAtPosition (GroupName, EncoderPosition1, EncoderPosition2, EncoderPosition3, EncoderPosition4, EncoderPosition5, EncoderPosition6)
```

Parameters

Input parameters

(string) GroupName: GroupName
(double) EncoderPosition1: EncoderPosition1
(double) EncoderPosition2: EncoderPosition2
(double) EncoderPosition3: EncoderPosition3
(double) EncoderPosition4: EncoderPosition4
(double) EncoderPosition5: EncoderPosition5
(double) EncoderPosition6: EncoderPosition6

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 GroupReadyAtPosition command which is used to Go to READY state with the users positions . Refer to the XPS Programmer's manual to get the command description.

2.2.57 GroupInitialize

Syntax

C# prototype

```
int GroupInitialize(string GroupName, out string errstring)
```

Python prototype

```
[errstring] GroupInitialize (GroupName)
```

Parameters

Input parameters

(string) GroupName: GroupName

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 GroupInitialize command which is used to Start the initialization. Refer to the XPS Programmer's manual to get the command description.

2.2.58 GroupInitializeWithEncoderCalibration**Syntax***C# prototype*

```
int GroupInitializeWithEncoderCalibration(string GroupName, out string errstring)
```

Python prototype

```
[errstring] GroupInitializeWithEncoderCalibration (GroupName)
```

Parameters*Input parameters*

(string) GroupName: GroupName

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 GroupInitializeWithEncoderCalibration command which is used to Start the initialization with encoder calibration. Refer to the XPS Programmer's manual to get the command description.

2.2.59 GroupKill**Syntax***C# prototype*

```
int GroupKill(string GroupName, out string errstring)
```

Python prototype

```
[errstring] GroupKill (GroupName)
```

Parameters*Input parameters*

(string) GroupName: GroupName

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 GroupKill command which is used to Kill the group. Refer to the XPS Programmer's manual to get the command description.

2.2.60 GroupMoveAbort

Syntax

C# prototype

```
int GroupMoveAbort(string GroupName, out string errstring)
```

Python prototype

```
[errstring] GroupMoveAbort (GroupName)
```

Parameters

Input parameters

(string) GroupName: GroupName

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 GroupMoveAbort command which is used to Abort a move. Refer to the XPS Programmer's manual to get the command description.

2.2.61 GroupMoveAbsolute

Syntax

C# prototype

```
int GroupMoveAbsolute(string GroupName, double[] TargetPosition, Int32 nbItems,  
out string errstring)
```

Python prototype

```
[errstring] GroupMoveAbsolute (GroupName, TargetPosition, nbItems)
```

Parameters

Input parameters

(string) GroupName: GroupName

(double[]) TargetPosition: TargetPosition

(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 GroupMoveAbsolute command which is used to Do an absolute move. Refer to the XPS Programmer's manual to get the command description.

2.2.62 GroupMoveRelative

Syntax

C# prototype

```
int GroupMoveRelative(string GroupName, double[] TargetDisplacement, Int32 nbItems, out string errstring)
```

Python prototype

```
[errstring] GroupMoveRelative (GroupName, TargetDisplacement, nbItems)
```

Parameters

Input parameters

(string) GroupName: GroupName

(double[]) TargetDisplacement: TargetDisplacement

(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 GroupMoveRelative command which is used to Do a relative move. Refer to the XPS Programmer's manual to get the command description.

2.2.63 GroupMotionDisable

Syntax

C# prototype

```
int GroupMotionDisable(string GroupName, out string errstring)
```

Python prototype

```
[errstring] GroupMotionDisable (GroupName)
```

Parameters

Input parameters

(string) GroupName: GroupName

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 GroupMotionDisable command which is used to Set Motion disable on selected group. Refer to the XPS Programmer's manual to get the command description.

2.2.64 GroupMotionEnable

Syntax

C# prototype

```
int GroupMotionEnable(string GroupName, out string errstring)
```

Python prototype

```
[errstring] GroupMotionEnable (GroupName)
```

Parameters

Input parameters

(string) GroupName: GroupName

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 GroupMotionEnable command which is used to Set Motion enable on selected group. Refer to the XPS Programmer's manual to get the command description.

2.2.65 GroupPositionCorrectedProfilerGet

Syntax

C# prototype

```
int GroupPositionCorrectedProfilerGet(string GroupName, double PositionX, double PositionY, out double CorrectedProfilerPositionX, out double CorrectedProfilerPositionY, out string errstring)
```

Python prototype

```
[CorrectedProfilerPositionX, CorrectedProfilerPositionY, errstring]  
GroupPositionCorrectedProfilerGet (GroupName, PositionX, PositionY)
```

Parameters

Input parameters

(string) GroupName: GroupName

(double) PositionX: PositionX

(double) PositionY: PositionY

Output parameters

(double) CorrectedProfilerPositionX: CorrectedProfilerPositionX

(double) CorrectedProfilerPositionY: CorrectedProfilerPositionY

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous GroupPositionCorrectedProfilerGet command which is used to Return corrected profiler positions. Refer to the XPS Programmer's manual to get the command description.

2.2.66 GroupPositionCurrentGet

Syntax

C# prototype

```
int GroupPositionCurrentGet(string GroupName, out double[] CurrentEncoderPosition,
Int32 nbItems, out string errstring)
```

Python prototype

```
[CurrentEncoderPosition, errstring] GroupPositionCurrentGet (GroupName, nbItems)
```

Parameters

Input parameters

(string) GroupName: GroupName

(Int32) nbItems: nbItems

Output parameters

(double[]) CurrentEncoderPosition: CurrentEncoderPosition

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous GroupPositionCurrentGet command which is used to Return current positions. Refer to the XPS Programmer's manual to get the command description.

2.2.67 GroupPositionSetpointGet

Syntax

C# prototype

```
int GroupPositionSetpointGet(string GroupName, out double[] SetPointPosition, Int32
nbItems, out string errstring)
```

Python prototype

```
[SetPointPosition, errstring] GroupPositionSetpointGet (GroupName, nbItems)
```

Parameters

Input parameters

(string) GroupName: GroupName

(Int32) nbItems: nbItems

Output parameters

(double[]) SetPointPosition: SetPointPosition

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous GroupPositionSetpointGet command which is used to Return setpoint positions. Refer to the XPS Programmer's manual to get the command description.

2.2.68 GroupPositionTargetGet

Syntax

C# prototype

```
int GroupPositionTargetGet(string GroupName, out double[] TargetPosition, Int32 nbItems, out string errstring)
```

Python prototype

```
[TargetPosition, errstring] GroupPositionTargetGet (GroupName, nbItems)
```

Parameters

Input parameters

(string) GroupName: GroupName

(Int32) nbItems: nbItems

Output parameters

(double[]) TargetPosition: TargetPosition

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous GroupPositionTargetGet command which is used to Return target positions. Refer to the XPS Programmer's manual to get the command description.

2.2.69 GroupReferencingActionExecute

Syntax

C# prototype

```
int GroupReferencingActionExecute(string PositionerName, string ReferencingAction, string ReferencingSensor, double ReferencingParameter, out string errstring)
```

Python prototype

```
[errstring] GroupReferencingActionExecute (PositionerName, ReferencingAction, ReferencingSensor, ReferencingParameter)
```

Parameters

Input parameters

(string) PositionerName: PositionerName

(string) ReferencingAction: ReferencingAction

(string) ReferencingSensor: ReferencingSensor

(double) ReferencingParameter: ReferencingParameter

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 GroupReferencingActionExecute command which is used to Execute an action in referencing mode. Refer to the XPS Programmer's manual to get the command description.

2.2.70 GroupReferencingStart**Syntax***C# prototype*

```
int GroupReferencingStart(string GroupName, out string errstring)
```

Python prototype

```
[errstring] GroupReferencingStart (GroupName)
```

Parameters*Input parameters*

(string) GroupName: GroupName

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 GroupReferencingStart command which is used to Enter referencing mode. Refer to the XPS Programmer's manual to get the command description.

2.2.71 GroupReferencingStop**Syntax***C# prototype*

```
int GroupReferencingStop(string GroupName, out string errstring)
```

Python prototype

```
[errstring] GroupReferencingStop (GroupName)
```

Parameters*Input parameters*

(string) GroupName: GroupName

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 GroupReferencingStop command which is used to Exit referencing mode. Refer to the XPS Programmer's manual to get the command description.

2.2.72 GroupStatusGet

Syntax

C# prototype

```
int GroupStatusGet(string GroupName, out Int32 Status, out string errstring)
```

Python prototype

```
[Status, errstring] GroupStatusGet (GroupName)
```

Parameters

Input parameters

(string) GroupName: GroupName

Output parameters

(Int32_i) Status: Status

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous GroupStatusGet command which is used to Return group status. Refer to the XPS Programmer's manual to get the command description.

2.2.73 GroupStatusStringGet

Syntax

C# prototype

```
int GroupStatusStringGet(Int32 GroupStatusCode, out string GroupStatusString, out string errstring)
```

Python prototype

```
[GroupStatusString, errstring] GroupStatusStringGet (GroupStatusCode)
```

Parameters

Input parameters

(Int32) GroupStatusCode: GroupStatusCode

Output parameters

(string) GroupStatusString: GroupStatusString

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous GroupStatusStringGet command which is used to Return the group status string corresponding to the group status code. Refer to the XPS Programmer's manual to get the command description.

2.2.74 KillAll

Syntax

C# prototype

int KillAll(out string errstring)

Python prototype

[errstring] KillAll ()

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 KillAll command which is used to Put all groups in 'Not initialized' state. Refer to the XPS Programmer's manual to get the command description.

2.2.75 RestartApplication

Syntax

C# prototype

int RestartApplication(out string errstring)

Python prototype

[errstring] RestartApplication ()

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 RestartApplication command which is used to Restart the Controller. Refer to the XPS Programmer's manual to get the command description.

2.2.76 PositionerBacklashGet

Syntax

C# prototype

```
int PositionerBacklashGet(string PositionerName, out double BacklashValue, out string BacklashStatus, out string errstring)
```

Python prototype

```
[BacklashValue, BacklashStatus, errstring] PositionerBacklashGet (PositionerName)
```

Parameters

Input parameters

(string) PositionerName: PositionerName

Output parameters

(double) BacklashValue: BacklashValue

(string) BacklashStatus: BacklashStatus

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous PositionerBacklashGet command which is used to Read backlash value and status. Refer to the XPS Programmer's manual to get the command description.

2.2.77 PositionerBacklashSet

Syntax

C# prototype

```
int PositionerBacklashSet(string PositionerName, double BacklashValue, out string errstring)
```

Python prototype

```
[errstring] PositionerBacklashSet (PositionerName, BacklashValue)
```

Parameters

Input parameters

(string) PositionerName: PositionerName

(double) BacklashValue: BacklashValue

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 PositionerBacklashSet command which is used to Set backlash value. Refer to the XPS Programmer's manual to get the command description.

2.2.78 PositionerBacklashEnable

Syntax

C# prototype

```
int PositionerBacklashEnable(string PositionerName, out string errstring)
```

Python prototype

```
[errstring] PositionerBacklashEnable (PositionerName)
```

Parameters

Input parameters

(string) PositionerName: PositionerName

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 PositionerBacklashEnable command which is used to Enable the backlash. Refer to the XPS Programmer's manual to get the command description.

2.2.79 PositionerBacklashDisable

Syntax

C# prototype

```
int PositionerBacklashDisable(string PositionerName, out string errstring)
```

Python prototype

```
[errstring] PositionerBacklashDisable (PositionerName)
```

Parameters

Input parameters

(string) PositionerName: PositionerName

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 PositionerBacklashDisable command which is used to Disable the backlash. Refer to the XPS Programmer's manual to get the command description.

2.2.80 PositionerCorrectorNotchFiltersSet

Syntax

C# prototype

```
int PositionerCorrectorNotchFiltersSet(string PositionerName, double
NotchFrequency1, double NotchBandwith1, double NotchGain1, double
NotchFrequency2, double NotchBandwith2, double NotchGain2, out string errstring)
```

Python prototype

```
[errstring] PositionerCorrectorNotchFiltersSet (PositionerName, NotchFrequency1,
NotchBandwith1, NotchGain1, NotchFrequency2, NotchBandwith2, NotchGain2)
```

Parameters

Input parameters

(string) PositionerName: PositionerName
(double) NotchFrequency1: NotchFrequency1
(double) NotchBandwith1: NotchBandwith1
(double) NotchGain1: NotchGain1
(double) NotchFrequency2: NotchFrequency2
(double) NotchBandwith2: NotchBandwith2
(double) NotchGain2: NotchGain2

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 PositionerCorrectorNotchFiltersSet command which is used to Update filters parameters . Refer to the XPS Programmer's manual to get the command description.

2.2.81 PositionerCorrectorNotchFiltersGet

Syntax

C# prototype

```
int PositionerCorrectorNotchFiltersGet(string PositionerName, out double
NotchFrequency1, out double NotchBandwith1, out double NotchGain1, out double
NotchFrequency2, out double NotchBandwith2, out double NotchGain2, out string
errstring)
```

Python prototype

```
[NotchFrequency1, NotchBandwith1, NotchGain1, NotchFrequency2,
NotchBandwith2, NotchGain2, errstring] PositionerCorrectorNotchFiltersGet
(PositionerName)
```

Parameters

Input parameters

(string) PositionerName: PositionerName

Output parameters

(double) NotchFrequency1: NotchFrequency1

(double) NotchBandwidth1: NotchBandwidth1

(double) NotchGain1: NotchGain1

(double) NotchFrequency2: NotchFrequency2

(double) NotchBandwidth2: NotchBandwidth2

(double) NotchGain2: NotchGain2

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous PositionerCorrectorNotchFiltersGet command which is used to Read filters parameters . Refer to the XPS Programmer's manual to get the command description.

2.2.82 PositionerCorrectorPIDFFAccelerationSet**Syntax***C# prototype*

int PositionerCorrectorPIDFFAccelerationSet(string PositionerName, bool ClosedLoopStatus, double KP, double KI, double KD, double KS, double IntegrationTime, double DerivativeFilterCutOffFrequency, double GKP, double GKI, double GKD, double KForm, double FeedForwardGainAcceleration, out string errstring)

Python prototype

[errstring] PositionerCorrectorPIDFFAccelerationSet (PositionerName, ClosedLoopStatus, KP, KI, KD, KS, IntegrationTime, DerivativeFilterCutOffFrequency, GKP, GKI, GKD, KForm, FeedForwardGainAcceleration)

Parameters*Input parameters*

(string) PositionerName: PositionerName

(bool) ClosedLoopStatus: ClosedLoopStatus

(double) KP: KP

(double) KI: KI

(double) KD: KD

(double) KS: KS

(double) IntegrationTime: IntegrationTime

(double) DerivativeFilterCutOffFrequency: DerivativeFilterCutOffFrequency

(double) GKP: GKP

(double) GKI: GKI

(double) GKD: GKD

(double) KForm: KForm

(double) FeedForwardGainAcceleration: FeedForwardGainAcceleration

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 PositionerCorrectorPIDFFAccelerationSet command which is used to Update corrector parameters. Refer to the XPS Programmer's manual to get the command description.

2.2.83 PositionerCorrectorPIDFFAccelerationGet**Syntax***C# prototype*

```
int PositionerCorrectorPIDFFAccelerationGet(string PositionerName, out bool
ClosedLoopStatus, out double KP, out double KI, out double KD, out double KS, out
double IntegrationTime, out double DerivativeFilterCutOffFrequency, out double GKP,
out double GKI, out double GKD, out double KForm, out double
FeedForwardGainAcceleration, out string errstring)
```

Python prototype

```
[ClosedLoopStatus, KP, KI, KD, KS, IntegrationTime,
DerivativeFilterCutOffFrequency, GKP, GKI, GKD, KForm,
FeedForwardGainAcceleration, errstring] PositionerCorrectorPIDFFAccelerationGet
(PositionerName)
```

Parameters*Input parameters*

(string) PositionerName: PositionerName

Output parameters

(bool) ClosedLoopStatus: ClosedLoopStatus

(double) KP: KP

(double) KI: KI

(double) KD: KD

(double) KS: KS

(double) IntegrationTime: IntegrationTime

(double) DerivativeFilterCutOffFrequency: DerivativeFilterCutOffFrequency

(double) GKP: GKP

(double) GKI: GKI

(double) GKD: GKD

(double) KForm: KForm

(double) FeedForwardGainAcceleration: FeedForwardGainAcceleration

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous PositionerCorrectorPIDFFAccelerationGet command which is used to Read corrector parameters. Refer to the XPS Programmer's manual to get the command description.

2.2.84 PositionerCorrectorPIDFFVelocitySet**Syntax***C# prototype*

```
int PositionerCorrectorPIDFFVelocitySet(string PositionerName, bool
ClosedLoopStatus, double KP, double KI, double KD, double KS, double
IntegrationTime, double DerivativeFilterCutOffFrequency, double GKP, double GKI,
double GKD, double KForm, double FeedForwardGainVelocity, out string errstring)
```

Python prototype

```
[errstring] PositionerCorrectorPIDFFVelocitySet (PositionerName, ClosedLoopStatus,
KP, KI, KD, KS, IntegrationTime, DerivativeFilterCutOffFrequency, GKP, GKI, GKD,
KForm, FeedForwardGainVelocity)
```

Parameters*Input parameters*

(string) PositionerName: PositionerName
 (bool) ClosedLoopStatus: ClosedLoopStatus
 (double) KP: KP
 (double) KI: KI
 (double) KD: KD
 (double) KS: KS
 (double) IntegrationTime: IntegrationTime
 (double) DerivativeFilterCutOffFrequency: DerivativeFilterCutOffFrequency
 (double) GKP: GKP
 (double) GKI: GKI
 (double) GKD: GKD
 (double) KForm: KForm
 (double) FeedForwardGainVelocity: FeedForwardGainVelocity

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 PositionerCorrectorPIDFFVelocitySet command which is used to Update corrector parameters. Refer to the XPS Programmer's manual to get the command description.

2.2.85 PositionerCorrectorPIDFFVelocityGet

Syntax

C# prototype

```
int PositionerCorrectorPIDFFVelocityGet(string PositionerName, out bool
ClosedLoopStatus, out double KP, out double KI, out double KD, out double KS, out
double IntegrationTime, out double DerivativeFilterCutOffFrequency, out double GKP,
out double GKI, out double GKD, out double KForm, out double
FeedForwardGainVelocity, out string errstring)
```

Python prototype

```
[ClosedLoopStatus, KP, KI, KD, KS, IntegrationTime,
DerivativeFilterCutOffFrequency, GKP, GKI, GKD, KForm,
FeedForwardGainVelocity, errstring] PositionerCorrectorPIDFFVelocityGet
(PositionerName)
```

Parameters

Input parameters

(string) PositionerName: PositionerName

Output parameters

(bool) ClosedLoopStatus: ClosedLoopStatus

(double) KP: KP

(double) KI: KI

(double) KD: KD

(double) KS: KS

(double) IntegrationTime: IntegrationTime

(double) DerivativeFilterCutOffFrequency: DerivativeFilterCutOffFrequency

(double) GKP: GKP

(double) GKI: GKI

(double) GKD: GKD

(double) KForm: KForm

(double) FeedForwardGainVelocity: FeedForwardGainVelocity

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous PositionerCorrectorPIDFFVelocityGet command which is used to Read corrector parameters. Refer to the XPS Programmer's manual to get the command description.

2.2.86 PositionerCorrectorPIDDualFFVoltageSet

Syntax

C# prototype

```
int PositionerCorrectorPIDDualFFVoltageSet(string PositionerName, bool
ClosedLoopStatus, double KP, double KI, double KD, double KS, double
IntegrationTime, double DerivativeFilterCutOffFrequency, double GKP, double GKI,
double GKD, double KForm, double FeedForwardGainVelocity, double
FeedForwardGainAcceleration, double Friction, out string errstring)
```

Python prototype

```
[errstring] PositionerCorrectorPIDDualFFVoltageSet (PositionerName,
ClosedLoopStatus, KP, KI, KD, KS, IntegrationTime,
DerivativeFilterCutOffFrequency, GKP, GKI, GKD, KForm,
FeedForwardGainVelocity, FeedForwardGainAcceleration, Friction)
```

Parameters*Input parameters*

(string) PositionerName: PositionerName
 (bool) ClosedLoopStatus: ClosedLoopStatus
 (double) KP: KP
 (double) KI: KI
 (double) KD: KD
 (double) KS: KS
 (double) IntegrationTime: IntegrationTime
 (double) DerivativeFilterCutOffFrequency: DerivativeFilterCutOffFrequency
 (double) GKP: GKP
 (double) GKI: GKI
 (double) GKD: GKD
 (double) KForm: KForm
 (double) FeedForwardGainVelocity: FeedForwardGainVelocity
 (double) FeedForwardGainAcceleration: FeedForwardGainAcceleration
 (double) Friction: Friction

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 PositionerCorrectorPIDDualFFVoltageSet command which is used to Update corrector parameters. Refer to the XPS Programmer's manual to get the command description.

2.2.87 PositionerCorrectorPIDDualFFVoltageGet**Syntax***C# prototype*

```
int PositionerCorrectorPIDDualFFVoltageGet(string PositionerName, out bool
ClosedLoopStatus, out double KP, out double KI, out double KD, out double KS, out
double IntegrationTime, out double DerivativeFilterCutOffFrequency, out double GKP,
out double GKI, out double GKD, out double KForm, out double
FeedForwardGainVelocity, out double FeedForwardGainAcceleration, out double
Friction, out string errstring)
```

Python prototype

```
[ClosedLoopStatus, KP, KI, KD, KS, IntegrationTime,
DerivativeFilterCutOffFrequency, GKP, GKI, GKD, KForm,
FeedForwardGainVelocity, FeedForwardGainAcceleration, Friction, errstring]
PositionerCorrectorPIDDualFFVoltageGet (PositionerName)
```

Parameters*Input parameters*

(string) PositionerName: PositionerName

Output parameters

(bool) ClosedLoopStatus: ClosedLoopStatus

(double) KP: KP

(double) KI: KI

(double) KD: KD

(double) KS: KS

(double) IntegrationTime: IntegrationTime

(double) DerivativeFilterCutOffFrequency: DerivativeFilterCutOffFrequency

(double) GKP: GKP

(double) GKI: GKI

(double) GKD: GKD

(double) KForm: KForm

(double) FeedForwardGainVelocity: FeedForwardGainVelocity

(double) FeedForwardGainAcceleration: FeedForwardGainAcceleration

(double) Friction: Friction

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous PositionerCorrectorPIDDualFFVoltageGet command which is used to Read corrector parameters. Refer to the XPS Programmer's manual to get the command description.

2.2.88 PositionerCorrectorPIPositionSet**Syntax***C# prototype*

int PositionerCorrectorPIPositionSet(string PositionerName, bool ClosedLoopStatus, double KP, double KI, double IntegrationTime, out string errstring)

Python prototype

[errstring] PositionerCorrectorPIPositionSet (PositionerName, ClosedLoopStatus, KP, KI, IntegrationTime)

Parameters*Input parameters*

(string) PositionerName: PositionerName

(bool) ClosedLoopStatus: ClosedLoopStatus

(double) KP: KP

(double) KI: KI

(double) 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 PositionerCorrectorPIPositionSet command which is used to Update corrector parameters. Refer to the XPS Programmer's manual to get the command description.

2.2.89 PositionerCorrectorPIPositionGet**Syntax***C# prototype*

```
int PositionerCorrectorPIPositionGet(string PositionerName, out bool
ClosedLoopStatus, out double KP, out double KI, out double IntegrationTime, out
string errstring)
```

Python prototype

```
[ClosedLoopStatus, KP, KI, IntegrationTime, errstring]
PositionerCorrectorPIPositionGet (PositionerName)
```

Parameters*Input parameters*

(string) PositionerName: PositionerName

Output parameters

(bool) ClosedLoopStatus: ClosedLoopStatus

(double) KP: KP

(double) KI: KI

(double) 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 PositionerCorrectorPIPositionGet command which is used to Read corrector parameters. Refer to the XPS Programmer's manual to get the command description.

2.2.90 PositionerCorrectorTypeGet**Syntax***C# prototype*

```
int PositionerCorrectorTypeGet(string PositionerName, out string CorrectorType, out
string errstring)
```

Python prototype

```
[CorrectorType, errstring] PositionerCorrectorTypeGet (PositionerName)
```

Parameters*Input parameters*

(string) PositionerName: PositionerName

Output parameters

(string) CorrectorType: CorrectorType

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous PositionerCorrectorTypeGet command which is used to Read corrector type. Refer to the XPS Programmer's manual to get the command description.

2.2.91 PositionerCurrentVelocityAccelerationFiltersSet**Syntax***C# prototype*

int PositionerCurrentVelocityAccelerationFiltersSet(string PositionerName, double CurrentVelocityCutOffFrequency, double CurrentAccelerationCutOffFrequency, out string errstring)

Python prototype

[errstring] PositionerCurrentVelocityAccelerationFiltersSet (PositionerName, CurrentVelocityCutOffFrequency, CurrentAccelerationCutOffFrequency)

Parameters*Input parameters*

(string) PositionerName: PositionerName

(double) CurrentVelocityCutOffFrequency: CurrentVelocityCutOffFrequency

(double) CurrentAccelerationCutOffFrequency: CurrentAccelerationCutOffFrequency

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 PositionerCurrentVelocityAccelerationFiltersSet command which is used to Set current velocity and acceleration cut off frequencies. Refer to the XPS Programmer's manual to get the command description.

2.2.92 PositionerCurrentVelocityAccelerationFiltersGet**Syntax***C# prototype*

int PositionerCurrentVelocityAccelerationFiltersGet(string PositionerName, out double CurrentVelocityCutOffFrequency, out double CurrentAccelerationCutOffFrequency, out string errstring)

Python prototype

[CurrentVelocityCutOffFrequency, CurrentAccelerationCutOffFrequency, errstring]
PositionerCurrentVelocityAccelerationFiltersGet (PositionerName)

Parameters*Input parameters*

(string) PositionerName: PositionerName

Output parameters

(double) CurrentVelocityCutOffFrequency: CurrentVelocityCutOffFrequency

(double) CurrentAccelerationCutOffFrequency: CurrentAccelerationCutOffFrequency

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous PositionerCurrentVelocityAccelerationFiltersGet command which is used to Get current velocity and acceleration cut off frequencies. Refer to the XPS Programmer's manual to get the command description.

2.2.93 PositionerDriverStatusGet**Syntax***C# prototype*

int PositionerDriverStatusGet(string PositionerName, out Int32 DriverStatus, out string errstring)

Python prototype

[DriverStatus, errstring] PositionerDriverStatusGet (PositionerName)

Parameters*Input parameters*

(string) PositionerName: PositionerName

Output parameters

(Int32_i) DriverStatus: DriverStatus

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous PositionerDriverStatusGet command which is used to Read positioner driver status. Refer to the XPS Programmer's manual to get the command description.

2.2.94 PositionerDriverStatusStringGet

Syntax

C# prototype

```
int PositionerDriverStatusStringGet(Int32 PositionerDriverStatus, out string
PositionerDriverStatusString, out string errstring)
```

Python prototype

```
[PositionerDriverStatusString, errstring] PositionerDriverStatusStringGet
(PositionerDriverStatus)
```

Parameters

Input parameters

(Int32) PositionerDriverStatus: PositionerDriverStatus

Output parameters

(string) PositionerDriverStatusString: PositionerDriverStatusString

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous PositionerDriverStatusStringGet command which is used to Return the positioner driver status string corresponding to the positioner error code. Refer to the XPS Programmer's manual to get the command description.

2.2.95 PositionerEncoderAmplitudeValuesGet

Syntax

C# prototype

```
int PositionerEncoderAmplitudeValuesGet(string PositionerName, out double
CalibrationSinusAmplitude, out double CurrentSinusAmplitude, out double
CalibrationCosinusAmplitude, out double CurrentCosinusAmplitude, out string
errstring)
```

Python prototype

```
[CalibrationSinusAmplitude, CurrentSinusAmplitude, CalibrationCosinusAmplitude,
CurrentCosinusAmplitude, errstring] PositionerEncoderAmplitudeValuesGet
(PositionerName)
```

Parameters

Input parameters

(string) PositionerName: PositionerName

Output parameters

(double) CalibrationSinusAmplitude: CalibrationSinusAmplitude

(double) CurrentSinusAmplitude: CurrentSinusAmplitude

(double) CalibrationCosinusAmplitude: CalibrationCosinusAmplitude

(double) CurrentCosinusAmplitude: CurrentCosinusAmplitude

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous PositionerEncoderAmplitudeValuesGet command which is used to Read analog interpolated encoder amplitude values. Refer to the XPS Programmer's manual to get the command description.

2.2.96 PositionerEncoderCalibrationParametersGet**Syntax***C# prototype*

```
int PositionerEncoderCalibrationParametersGet(string PositionerName, out double
SinusOffset, out double CosinusOffset, out double DifferentialGain, out double
PhaseCompensation, out string errstring)
```

Python prototype

```
[SinusOffset, CosinusOffset, DifferentialGain, PhaseCompensation, errstring]
PositionerEncoderCalibrationParametersGet (PositionerName)
```

Parameters*Input parameters*

(string) PositionerName: PositionerName

Output parameters

(double) SinusOffset: SinusOffset

(double) CosinusOffset: CosinusOffset

(double) DifferentialGain: DifferentialGain

(double) PhaseCompensation: PhaseCompensation

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous PositionerEncoderCalibrationParametersGet command which is used to Read analog interpolated encoder calibration parameters. Refer to the XPS Programmer's manual to get the command description.

2.2.97 PositionerErrorGet**Syntax***C# prototype*

```
int PositionerErrorGet(string PositionerName, out Int32 ErrorCode, out string errstring)
```

Python prototype

```
[ErrorCode, errstring] PositionerErrorGet (PositionerName)
```

Parameters*Input parameters*

(string) PositionerName: PositionerName

Output parameters

(Int32_i) ErrorCode: ErrorCode

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous PositionerErrorGet command which is used to Read and clear positioner error code. Refer to the XPS Programmer's manual to get the command description.

2.2.98 PositionerErrorRead**Syntax***C# prototype*

```
int PositionerErrorRead(string PositionerName, out Int32 ErrorCode, out string errstring)
```

Python prototype

```
[ErrorCode, errstring] PositionerErrorRead (PositionerName)
```

Parameters*Input parameters*

(string) PositionerName: PositionerName

Output parameters

(Int32_i) ErrorCode: ErrorCode

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous PositionerErrorRead command which is used to Read only positioner error code without clear it. Refer to the XPS Programmer's manual to get the command description.

2.2.99 PositionerErrorStringGet**Syntax***C# prototype*

```
int PositionerErrorStringGet(Int32 PositionerErrorCode, out string PositionerErrorString, out string errstring)
```

Python prototype

```
[PositionerErrorString, errstring] PositionerErrorStringGet (PositionerErrorCode)
```

Parameters*Input parameters*

(Int32) PositionerErrorCode: PositionerErrorCode

Output parameters

(string) PositionerErrorString: PositionerErrorString

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous PositionerErrorStringGet command which is used to Return the positioner status string corresponding to the positioner error code. Refer to the XPS Programmer's manual to get the command description.

2.2.100 PositionerHardwareStatusGet**Syntax***C# prototype*

```
int PositionerHardwareStatusGet(string PositionerName, out Int32 HardwareStatus, out string errstring)
```

Python prototype

```
[HardwareStatus, errstring] PositionerHardwareStatusGet (PositionerName)
```

Parameters*Input parameters*

(string) PositionerName: PositionerName

Output parameters

(Int32_i) HardwareStatus: HardwareStatus

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous PositionerHardwareStatusGet command which is used to Read positioner hardware status. Refer to the XPS Programmer's manual to get the command description.

2.2.101 PositionerHardwareStatusStringGet**Syntax***C# prototype*

```
int PositionerHardwareStatusStringGet(Int32 PositionerHardwareStatus, out string PositionerHardwareStatusString, out string errstring)
```

Python prototype

```
[PositionerHardwareStatusString, errstring] PositionerHardwareStatusStringGet (PositionerHardwareStatus)
```

Parameters*Input parameters*

(Int32) PositionerHardwareStatus: PositionerHardwareStatus

Output parameters

(string) PositionerHardwareStatusString: PositionerHardwareStatusString

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous PositionerHardwareStatusStringGet command which is used to Return the positioner hardware status string corresponding to the positioner error code. Refer to the XPS Programmer's manual to get the command description.

2.2.102 PositionerHardInterpolatorFactorGet**Syntax***C# prototype*

int PositionerHardInterpolatorFactorGet(string PositionerName, out Int32 InterpolationFactor, out string errstring)

Python prototype

[InterpolationFactor, errstring] PositionerHardInterpolatorFactorGet (PositionerName)

Parameters*Input parameters*

(string) PositionerName: PositionerName

Output parameters

(Int32_i) InterpolationFactor: InterpolationFactor

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous PositionerHardInterpolatorFactorGet command which is used to Get hard interpolator parameters. Refer to the XPS Programmer's manual to get the command description.

2.2.103 PositionerHardInterpolatorFactorSet**Syntax***C# prototype*

int PositionerHardInterpolatorFactorSet(string PositionerName, Int32 InterpolationFactor, out string errstring)

Python prototype

[errstring] PositionerHardInterpolatorFactorSet (PositionerName, InterpolationFactor)

Parameters*Input parameters*

(string) PositionerName: PositionerName

(Int32) InterpolationFactor: InterpolationFactor

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 PositionerHardInterpolatorFactorSet command which is used to Set hard interpolator parameters. Refer to the XPS Programmer's manual to get the command description.

2.2.104 PositionerMaximumVelocityAndAccelerationGet**Syntax***C# prototype*

```
int PositionerMaximumVelocityAndAccelerationGet(string PositionerName, out double
MaximumVelocity, out double MaximumAcceleration, out string errstring)
```

Python prototype

```
[MaximumVelocity, MaximumAcceleration, errstring]
PositionerMaximumVelocityAndAccelerationGet (PositionerName)
```

Parameters*Input parameters*

(string) PositionerName: PositionerName

Output parameters

(double) MaximumVelocity: MaximumVelocity

(double) MaximumAcceleration: MaximumAcceleration

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous PositionerMaximumVelocityAndAccelerationGet command which is used to Return maximum velocity and acceleration of the positioner. Refer to the XPS Programmer's manual to get the command description.

2.2.105 PositionerMotionDoneGet**Syntax***C# prototype*

```
int PositionerMotionDoneGet(string PositionerName, out double PositionWindow, out
double VelocityWindow, out double CheckingTime, out double MeanPeriod, out
double TimeOut, out string errstring)
```

Python prototype

```
[PositionWindow, VelocityWindow, CheckingTime, MeanPeriod, TimeOut, errstring]
PositionerMotionDoneGet (PositionerName)
```

Parameters*Input parameters*

(string) PositionerName: PositionerName

Output parameters

(double) PositionWindow: PositionWindow

(double) VelocityWindow: VelocityWindow

(double) CheckingTime: CheckingTime

(double) MeanPeriod: MeanPeriod

(double) TimeOut: TimeOut

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous PositionerMotionDoneGet command which is used to Read motion done parameters. Refer to the XPS Programmer's manual to get the command description.

2.2.106 PositionerMotionDoneSet**Syntax***C# prototype*

int PositionerMotionDoneSet(string PositionerName, double PositionWindow, double VelocityWindow, double CheckingTime, double MeanPeriod, double TimeOut, out string errstring)

Python prototype

[errstring] PositionerMotionDoneSet (PositionerName, PositionWindow, VelocityWindow, CheckingTime, MeanPeriod, TimeOut)

Parameters*Input parameters*

(string) PositionerName: PositionerName

(double) PositionWindow: PositionWindow

(double) VelocityWindow: VelocityWindow

(double) CheckingTime: CheckingTime

(double) MeanPeriod: MeanPeriod

(double) TimeOut: TimeOut

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 PositionerMotionDoneSet command which is used to Update motion done parameters. Refer to the XPS Programmer's manual to get the command description.

2.2.107 PositionerSGammaExactVelocityAdjustedDisplacementGet

Syntax

C# prototype

```
int PositionerSGammaExactVelocityAdjustedDisplacementGet(string PositionerName,
double DesiredDisplacement, out double AdjustedDisplacement, out string errstring)
```

Python prototype

```
[AdjustedDisplacement, errstring]
PositionerSGammaExactVelocityAdjustedDisplacementGet (PositionerName,
DesiredDisplacement)
```

Parameters

Input parameters

(string) PositionerName: PositionerName

(double) DesiredDisplacement: DesiredDisplacement

Output parameters

(double) AdjustedDisplacement: AdjustedDisplacement

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous PositionerSGammaExactVelocityAdjustedDisplacementGet command which is used to Return adjusted displacement to get exact velocity. Refer to the XPS Programmer's manual to get the command description.

2.2.108 PositionerSGammaParametersGet

Syntax

C# prototype

```
int PositionerSGammaParametersGet(string PositionerName, out double Velocity, out
double Acceleration, out double MinimumTjerkTime, out double MaximumTjerkTime,
out string errstring)
```

Python prototype

```
[Velocity, Acceleration, MinimumTjerkTime, MaximumTjerkTime, errstring]
PositionerSGammaParametersGet (PositionerName)
```

Parameters

Input parameters

(string) PositionerName: PositionerName

Output parameters

(double) Velocity: Velocity

(double) Acceleration: Acceleration

(double) MinimumTjerkTime: MinimumTjerkTime

(double) MaximumTjerkTime: MaximumTjerkTime

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous PositionerSGammaParametersGet command which is used to Read dynamic parameters for one axe of a group for a future displacement . Refer to the XPS Programmer's manual to get the command description.

2.2.109 PositionerSGammaParametersSet**Syntax***C# prototype*

```
int PositionerSGammaParametersSet(string PositionerName, double Velocity, double Acceleration, double MinimumTjerkTime, double MaximumTjerkTime, out string errstring)
```

Python prototype

```
[errstring] PositionerSGammaParametersSet (PositionerName, Velocity, Acceleration, MinimumTjerkTime, MaximumTjerkTime)
```

Parameters*Input parameters*

(string) PositionerName: PositionerName

(double) Velocity: Velocity

(double) Acceleration: Acceleration

(double) MinimumTjerkTime: MinimumTjerkTime

(double) MaximumTjerkTime: MaximumTjerkTime

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 PositionerSGammaParametersSet command which is used to Update dynamic parameters for one axe of a group for a future displacement. Refer to the XPS Programmer's manual to get the command description.

2.2.110 PositionerSGammaParametersDistanceGet**Syntax***C# prototype*

```
int PositionerSGammaParametersDistanceGet(string PositionerName, double Displacement, double Velocity, double Acceleration, double MinJerkTime, double MaxJerkTime, out double DisplacementDuringAcc, out double DisplacementDuringVel, out string errstring)
```

Python prototype

```
[DisplacementDuringAcc, DisplacementDuringVel, errstring]  
PositionerSGammaParametersDistanceGet (PositionerName, Displacement, Velocity, Acceleration, MinJerkTime, MaxJerkTime)
```

Parameters*Input parameters*

(string) PositionerName: PositionerName

(double) Displacement: Displacement

(double) Velocity: Velocity

(double) Acceleration: Acceleration

(double) MinJerkTime: MinJerkTime

(double) MaxJerkTime: MaxJerkTime

Output parameters

(double) DisplacementDuringAcc: DisplacementDuringAcc

(double) DisplacementDuringVel: DisplacementDuringVel

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous PositionerSGammaParametersDistanceGet command which is used to Returns distance during acceleration phase and distance during constant velocity phase . Refer to the XPS Programmer's manual to get the command description.

2.2.111 PositionerSGammaPreviousMotionTimesGet**Syntax***C# prototype*

int PositionerSGammaPreviousMotionTimesGet(string PositionerName, out double SettingTime, out double SettlingTime, out string errstring)

Python prototype

[SettingTime, SettlingTime, errstring] PositionerSGammaPreviousMotionTimesGet(PositionerName)

Parameters*Input parameters*

(string) PositionerName: PositionerName

Output parameters

(double) SettingTime: SettingTime

(double) SettlingTime: SettlingTime

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous PositionerSGammaPreviousMotionTimesGet command which is used to Read SettingTime and SettlingTime. Refer to the XPS Programmer's manual to get the command description.

2.2.112 PositionerStageParameterGet

Syntax

C# prototype

```
int PositionerStageParameterGet(string PositionerName, string ParameterName, out string ParameterValue, out string errstring)
```

Python prototype

```
[ParameterValue, errstring] PositionerStageParameterGet (PositionerName, ParameterName)
```

Parameters

Input parameters

(string) PositionerName: PositionerName

(string) ParameterName: ParameterName

Output parameters

(string) ParameterValue: ParameterValue

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous PositionerStageParameterGet command which is used to Return the stage parameter. Refer to the XPS Programmer's manual to get the command description.

2.2.113 PositionerStageParameterSet

Syntax

C# prototype

```
int PositionerStageParameterSet(string PositionerName, string ParameterName, string ParameterValue, out string errstring)
```

Python prototype

```
[errstring] PositionerStageParameterSet (PositionerName, ParameterName, ParameterValue)
```

Parameters

Input parameters

(string) PositionerName: PositionerName

(string) ParameterName: ParameterName

(string) ParameterValue: ParameterValue

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 PositionerStageParameterSet command which is used to Save the stage parameter. Refer to the XPS Programmer's manual to get the command description.

2.2.114 PositionerUserTravelLimitsGet**Syntax***C# prototype*

```
int PositionerUserTravelLimitsGet(string PositionerName, out double
UserMinimumTarget, out double UserMaximumTarget, out string errstring)
```

Python prototype

```
[UserMinimumTarget, UserMaximumTarget, errstring] PositionerUserTravelLimitsGet
(PositionerName)
```

Parameters*Input parameters*

(string) PositionerName: PositionerName

Output parameters

(double) UserMinimumTarget: UserMinimumTarget

(double) UserMaximumTarget: UserMaximumTarget

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous PositionerUserTravelLimitsGet command which is used to Read UserMinimumTarget and UserMaximumTarget. Refer to the XPS Programmer's manual to get the command description.

2.2.115 PositionerUserTravelLimitsSet**Syntax***C# prototype*

```
int PositionerUserTravelLimitsSet(string PositionerName, double UserMinimumTarget,
double UserMaximumTarget, out string errstring)
```

Python prototype

```
[errstring] PositionerUserTravelLimitsSet (PositionerName, UserMinimumTarget,
UserMaximumTarget)
```

Parameters*Input parameters*

(string) PositionerName: PositionerName

(double) UserMinimumTarget: UserMinimumTarget

(double) UserMaximumTarget: UserMaximumTarget

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 PositionerUserTravelLimitsSet command which is used to Update UserMinimumTarget and UserMaximumTarget. Refer to the XPS Programmer's manual to get the command description.

2.2.116 HexapodMoveAbsolute**Syntax***C# prototype*

```
int HexapodMoveAbsolute(string GroupName, string CoordinateSystem, double X,
double Y, double Z, double U, double V, double W, out string errstring)
```

Python prototype

```
[errstring] HexapodMoveAbsolute (GroupName, CoordinateSystem, X, Y, Z, U, V, W)
```

Parameters*Input parameters*

(string) GroupName: GroupName

(string) CoordinateSystem: CoordinateSystem

(double) X: X

(double) Y: Y

(double) Z: Z

(double) U: U

(double) V: V

(double) W: W

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 HexapodMoveAbsolute command which is used to Hexapod absolute move in a specific coordinate system. Refer to the XPS Programmer's manual to get the command description.

2.2.117 HexapodMoveIncremental**Syntax***C# prototype*

```
int HexapodMoveIncremental(string GroupName, string CoordinateSystem, double dX,
double dY, double dZ, double dU, double dV, double dW, out string errstring)
```

Python prototype

```
[errstring] HexapodMoveIncremental (GroupName, CoordinateSystem, dX, dY, dZ,
dU, dV, dW)
```


Parameters*Input parameters*

(string) GroupName: GroupName
 (string) CoordinateSystem: CoordinateSystem
 (double) dX: dX
 (double) dY: dY
 (double) dZ: dZ
 (double) dU: dU
 (double) dV: dV
 (double) dW: dW

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 HexapodMoveIncremental command which is used to Hexapod incremental move in a specific coordinate system. Refer to the XPS Programmer's manual to get the command description.

2.2.118 HexapodCoordinatesGet**Syntax***C# prototype*

```
int HexapodCoordinatesGet(string GroupName, string CoordinateSystemIn, string
CoordinateSystemOut, double Xin, double Yin, double Zin, double Uin, double Vin,
double Win, out double Xout, out double Yout, out double Zout, out double Uout, out
double Vout, out double Wout, out string errstring)
```

Python prototype

```
[Xout, Yout, Zout, Uout, Vout, Wout, errstring] HexapodCoordinatesGet (GroupName,
CoordinateSystemIn, CoordinateSystemOut, Xin, Yin, Zin, Uin, Vin, Win)
```

Parameters*Input parameters*

(string) GroupName: GroupName
 (string) CoordinateSystemIn: CoordinateSystemIn
 (string) CoordinateSystemOut: CoordinateSystemOut
 (double) Xin: Xin
 (double) Yin: Yin
 (double) Zin: Zin
 (double) Uin: Uin
 (double) Vin: Vin
 (double) Win: Win

Output parameters

(double) Xout: Xout
 (double) Yout: Yout
 (double) Zout: Zout
 (double) Uout: Uout
 (double) Vout: Vout
 (double) Wout: Wout
 (string) errString: The failure reason

Return

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

Description

This function is used to process synchronous HexapodCoordinatesGet command which is used to Get coordinates in a specific coordinate system of a point specified in another coordinate system. Refer to the XPS Programmer's manual to get the command description.

2.2.119 HexapodCoordinateSystemSet**Syntax***C# prototype*

int HexapodCoordinateSystemSet(string GroupName, string CoordinateSystem, double X, double Y, double Z, double U, double V, double W, out string errstring)

Python prototype

[errstring] HexapodCoordinateSystemSet (GroupName, CoordinateSystem, X, Y, Z, U, V, W)

Parameters*Input parameters*

(string) GroupName: GroupName
 (string) CoordinateSystem: CoordinateSystem
 (double) X: X
 (double) Y: Y
 (double) Z: Z
 (double) U: U
 (double) V: V
 (double) W: W

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 HexapodCoordinateSystemSet command which is used to Modify the position of a coordinate system. Refer to the XPS Programmer's manual to get the command description.

2.2.120 HexapodCoordinateSystemGet

Syntax

C# prototype

```
int HexapodCoordinateSystemGet(string GroupName, string CoordinateSystem, out double X, out double Y, out double Z, out double U, out double V, out double W, out string errstring)
```

Python prototype

```
[X, Y, Z, U, V, W, errstring] HexapodCoordinateSystemGet (GroupName, CoordinateSystem)
```

Parameters

Input parameters

(string) GroupName: GroupName

(string) CoordinateSystem: CoordinateSystem

Output parameters

(double) X: X

(double) Y: Y

(double) Z: Z

(double) U: U

(double) V: V

(double) W: W

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous HexapodCoordinateSystemGet command which is used to Get the position of a coordinate system. Refer to the XPS Programmer's manual to get the command description.

2.2.121 HexapodMoveIncrementalControl

Syntax

C# prototype

```
int HexapodMoveIncrementalControl(string GroupName, string CoordinateSystem, string HexapodTrajectoryType, double dX, double dY, double dZ, out string errstring)
```

Python prototype

```
[errstring] HexapodMoveIncrementalControl (GroupName, CoordinateSystem, HexapodTrajectoryType, dX, dY, dZ)
```

Parameters*Input parameters*

(string) GroupName: GroupName
(string) CoordinateSystem: CoordinateSystem
(string) HexapodTrajectoryType: HexapodTrajectoryType
(double) dX: dX
(double) dY: dY
(double) dZ: dZ

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 HexapodMoveIncrementalControl command which is used to Hexapod trajectory . Refer to the XPS Programmer's manual to get the command description.

2.2.122 HexapodMoveIncrementalControlWithTargetVelocity**Syntax***C# prototype*

int HexapodMoveIncrementalControlWithTargetVelocity(string GroupName, string CoordinateSystem, string HexapodTrajectoryType, double dX, double dY, double dZ, double Velocity, out string errstring)

Python prototype

[errstring] HexapodMoveIncrementalControlWithTargetVelocity (GroupName, CoordinateSystem, HexapodTrajectoryType, dX, dY, dZ, Velocity)

Parameters*Input parameters*

(string) GroupName: GroupName
(string) CoordinateSystem: CoordinateSystem
(string) HexapodTrajectoryType: HexapodTrajectoryType
(double) dX: dX
(double) dY: dY
(double) dZ: dZ
(double) Velocity: Velocity

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 HexapodMoveIncrementalControlWithTargetVelocity command which is used to Hexapod trajectory . Refer to the XPS Programmer's manual to get the command description.

2.2.123 HexapodMoveIncrementalControlPulseAndGatheringSet**Syntax***C# prototype*

```
int HexapodMoveIncrementalControlPulseAndGatheringSet(string GroupName, Int32 Divisor, out string errstring)
```

Python prototype

```
[errstring] HexapodMoveIncrementalControlPulseAndGatheringSet (GroupName, Divisor)
```

Parameters*Input parameters*

(string) GroupName: GroupName

(Int32) Divisor: Divisor

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 HexapodMoveIncrementalControlPulseAndGatheringSet command which is used to Configure gathering with pulses : gathered data are X, Y, Z, U, V, W and pulses will be generated during only constant velocity. Refer to the XPS Programmer's manual to get the command description.

2.2.124 HexapodMoveIncrementalControlLimitGet**Syntax***C# prototype*

```
int HexapodMoveIncrementalControlLimitGet(string GroupName, string CoordinateSystem, string HexapodTrajectoryType, double dX, double dY, double dZ, out double MaximumVelocityCarriage, out double TrajectoryPercent, out string errstring)
```

Python prototype

```
[MaximumVelocityCarriage, TrajectoryPercent, errstring] HexapodMoveIncrementalControlLimitGet (GroupName, CoordinateSystem, HexapodTrajectoryType, dX, dY, dZ)
```

Parameters*Input parameters*

(string) GroupName: GroupName
 (string) CoordinateSystem: CoordinateSystem
 (string) HexapodTrajectoryType: HexapodTrajectoryType
 (double) dX: dX
 (double) dY: dY
 (double) dZ: dZ

Output parameters

(double) MaximumVelocityCarriage: MaximumVelocityCarriage
 (double) TrajectoryPercent: TrajectoryPercent
 (string) errString: The failure reason

Return

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

Description

This function is used to process synchronous HexapodMoveIncrementalControlLimitGet command which is used to Returns the maximum velocity of carriage and the percent of the trajectory executable. Refer to the XPS Programmer's manual to get the command description.

2.2.125 HexapodSGammaParametersDistanceGet**Syntax***C# prototype*

```
int HexapodSGammaParametersDistanceGet(string PositionerName, double Displacement, double Velocity, double Acceleration, double MinJerkTime, double MaxJerkTime, out double DisplacementDuringAcc, out double DisplacementDuringVel, out string errstring)
```

Python prototype

```
[DisplacementDuringAcc, DisplacementDuringVel, errstring]  
HexapodSGammaParametersDistanceGet (PositionerName, Displacement, Velocity, Acceleration, MinJerkTime, MaxJerkTime)
```

Parameters*Input parameters*

(string) PositionerName: PositionerName
 (double) Displacement: Displacement
 (double) Velocity: Velocity
 (double) Acceleration: Acceleration
 (double) MinJerkTime: MinJerkTime
 (double) MaxJerkTime: MaxJerkTime

Output parameters

(double) DisplacementDuringAcc: DisplacementDuringAcc
 (double) DisplacementDuringVel: DisplacementDuringVel
 (string) errString: The failure reason

Return

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

Description

This function is used to process synchronous HexapodSGammaParametersDistanceGet command which is used to Returns distance during acceleration phase and distance during constant velocity phase for a virtual SGamma profiler. Refer to the XPS Programmer's manual to get the command description.

2.2.126 SingleAxisSlaveModeEnable**Syntax***C# prototype*

```
int SingleAxisSlaveModeEnable(string GroupName, out string errstring)
```

Python prototype

```
[errstring] SingleAxisSlaveModeEnable (GroupName)
```

Parameters*Input parameters*

(string) GroupName: GroupName

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 SingleAxisSlaveModeEnable command which is used to Enable the slave mode. Refer to the XPS Programmer's manual to get the command description.

2.2.127 SingleAxisSlaveModeDisable**Syntax***C# prototype*

```
int SingleAxisSlaveModeDisable(string GroupName, out string errstring)
```

Python prototype

```
[errstring] SingleAxisSlaveModeDisable (GroupName)
```

Parameters*Input parameters*

(string) GroupName: GroupName

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 SingleAxisSlaveModeDisable command which is used to Disable the slave mode. Refer to the XPS Programmer's manual to get the command description.

2.2.128 SingleAxisSlaveParametersSet**Syntax***C# prototype*

```
int SingleAxisSlaveParametersSet(string GroupName, string PositionerName, double Ratio, out string errstring)
```

Python prototype

```
[errstring] SingleAxisSlaveParametersSet (GroupName, PositionerName, Ratio)
```

Parameters*Input parameters*

(string) GroupName: GroupName

(string) PositionerName: PositionerName

(double) Ratio: Ratio

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 SingleAxisSlaveParametersSet command which is used to Set slave parameters. Refer to the XPS Programmer's manual to get the command description.

2.2.129 SingleAxisSlaveParametersGet**Syntax***C# prototype*

```
int SingleAxisSlaveParametersGet(string GroupName, out string PositionerName, out double Ratio, out string errstring)
```

Python prototype

```
[PositionerName, Ratio, errstring] SingleAxisSlaveParametersGet (GroupName)
```

Parameters*Input parameters*

(string) GroupName: GroupName

Output parameters

(string) PositionerName: PositionerName

(double) Ratio: Ratio

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous SingleAxisSlaveParametersGet command which is used to Get slave parameters. Refer to the XPS Programmer's manual to get the command description.

2.2.130 OptionalModuleExecute**Syntax***C# prototype*

```
int OptionalModuleExecute(string ModuleFileName, string TaskName, out string errstring)
```

Python prototype

```
[errstring] OptionalModuleExecute (ModuleFileName, TaskName)
```

Parameters*Input parameters*

(string) ModuleFileName: ModuleFileName

(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 OptionalModuleExecute command which is used to Execute an optional module. Refer to the XPS Programmer's manual to get the command description.

2.2.131 OptionalModuleKill**Syntax***C# prototype*

```
int OptionalModuleKill(string TaskName, out string errstring)
```

Python prototype

```
[errstring] OptionalModuleKill (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 OptionalModuleKill command which is used to Kill an optional module. Refer to the XPS Programmer's manual to get the command description.

2.2.132 ControllerStatusGet

Syntax

C# prototype

```
int ControllerStatusGet(out Int32 ControllerStatus, out string errstring)
```

Python prototype

```
[ControllerStatus, errstring] ControllerStatusGet ()
```

Parameters

Input parameters

None

Output parameters

(Int32_i) ControllerStatus: ControllerStatus

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous ControllerStatusGet command which is used to Read controller current status. Refer to the XPS Programmer's manual to get the command description.

2.2.133 ControllerStatusStringGet

Syntax

C# prototype

```
int ControllerStatusStringGet(Int32 ControllerStatusCode, out string  
ControllerStatusString, out string errstring)
```

Python prototype

```
[ControllerStatusString, errstring] ControllerStatusStringGet (ControllerStatusCode)
```

Parameters

Input parameters

(Int32) ControllerStatusCode: ControllerStatusCode

Output parameters

(string) ControllerStatusString: ControllerStatusString

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous ControllerStatusStringGet command which is used to Return the controller status string corresponding to the controller status code. Refer to the XPS Programmer's manual to get the command description.

2.2.134 EEPROMCIESet

Syntax

C# prototype

```
int EEPROMCIESet(Int32 CardNumber, string ReferenceString, out string errstring)
```

Python prototype

```
[errstring] EEPROMCIESet (CardNumber, ReferenceString)
```

Parameters

Input parameters

(Int32) CardNumber: CardNumber

(string) ReferenceString: ReferenceString

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 EEPROMCIESet command which is used to Set CIE EEPROM reference string. Refer to the XPS Programmer's manual to get the command description.

2.2.135 EEPROMDACOffsetCIESet

Syntax

C# prototype

```
int EEPROMDACOffsetCIESet(Int32 PlugNumber, double DAC1Offset, double DAC2Offset, out string errstring)
```

Python prototype

```
[errstring] EEPROMDACOffsetCIESet (PlugNumber, DAC1Offset, DAC2Offset)
```

Parameters

Input parameters

(Int32) PlugNumber: PlugNumber

(double) DAC1Offset: DAC1Offset

(double) DAC2Offset: DAC2Offset

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 EEPROMDACOffsetCIESet command which is used to Set CIE DAC offsets. Refer to the XPS Programmer's manual to get the command description.

2.2.136 EEPROMDriverSet

Syntax

C# prototype

```
int EEPROMDriverSet(Int32 PlugNumber, string ReferenceString, out string errstring)
```

Python prototype

```
[errstring] EEPROMDriverSet (PlugNumber, ReferenceString)
```

Parameters

Input parameters

(Int32) PlugNumber: PlugNumber

(string) ReferenceString: ReferenceString

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 EEPROMDriverSet command which is used to Set Driver EEPROM reference string. Refer to the XPS Programmer's manual to get the command description.

2.2.137 EEPROMINTSet

Syntax

C# prototype

```
int EEPROMINTSet(Int32 CardNumber, string ReferenceString, out string errstring)
```

Python prototype

```
[errstring] EEPROMINTSet (CardNumber, ReferenceString)
```

Parameters

Input parameters

(Int32) CardNumber: CardNumber

(string) ReferenceString: ReferenceString

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 EEPROMINTSet command which is used to Set INT EEPROM reference string. Refer to the XPS Programmer's manual to get the command description.

2.2.138 CPUCoreAndBoardSupplyVoltagesGet**Syntax***C# prototype*

```
int CPUCoreAndBoardSupplyVoltagesGet(out double VoltageCPUCore, out double
SupplyVoltage1P5V, out double SupplyVoltage3P3V, out double SupplyVoltage5V,
out double SupplyVoltage12V, out double SupplyVoltageM12V, out double
SupplyVoltageM5V, out double SupplyVoltage5VSB, out string errstring)
```

Python prototype

```
[VoltageCPUCore, SupplyVoltage1P5V, SupplyVoltage3P3V, SupplyVoltage5V,
SupplyVoltage12V, SupplyVoltageM12V, SupplyVoltageM5V, SupplyVoltage5VSB,
errstring] CPUCoreAndBoardSupplyVoltagesGet ()
```

Parameters*Input parameters*

None

Output parameters

(double) VoltageCPUCore: VoltageCPUCore

(double) SupplyVoltage1P5V: SupplyVoltage1P5V

(double) SupplyVoltage3P3V: SupplyVoltage3P3V

(double) SupplyVoltage5V: SupplyVoltage5V

(double) SupplyVoltage12V: SupplyVoltage12V

(double) SupplyVoltageM12V: SupplyVoltageM12V

(double) SupplyVoltageM5V: SupplyVoltageM5V

(double) SupplyVoltage5VSB: SupplyVoltage5VSB

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous CPUCoreAndBoardSupplyVoltagesGet command which is used to Get power informations. Refer to the XPS Programmer's manual to get the command description.

2.2.139 CPUTemperatureAndFanSpeedGet**Syntax***C# prototype*

```
int CPUTemperatureAndFanSpeedGet(out double CPUTemperature, out double
CPUFanSpeed, out string errstring)
```

Python prototype

```
[CPUTemperature, CPUFanSpeed, errstring] CPUTemperatureAndFanSpeedGet ()
```

Parameters*Input parameters*

None

Output parameters

(double) CPUtemperature: CPUtemperature

(double) CPUfanSpeed: CPUfanSpeed

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous CPUtemperatureAndFanSpeedGet command which is used to Get CPU temperature and fan speed. Refer to the XPS Programmer's manual to get the command description.

2.2.140 RunTraceloggerProcessWithTimeSetting**Syntax***C# prototype*

```
int RunTraceloggerProcessWithTimeSetting(Int32 TraceloggerTime, out string
errstring)
```

Python prototype

```
[errstring] RunTraceloggerProcessWithTimeSetting (TraceloggerTime)
```

Parameters*Input parameters*

(Int32) TraceloggerTime: TraceloggerTime

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 RunTraceloggerProcessWithTimeSetting command which is used to Run Tracelogger Process With Time Setting. Refer to the XPS Programmer's manual to get the command description.

2.2.141 RunTraceloggerProcessWithRollingBuffer**Syntax***C# prototype*

```
int RunTraceloggerProcessWithRollingBuffer( out string errstring)
```

Python prototype

```
[errstring] RunTraceloggerProcessWithRollingBuffer ()
```

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 RunTraceloggerProcessWithRollingBuffer command which is used to Run Tracelogger Process With Rolling Buffer. Refer to the XPS Programmer's manual to get the command description.

2.2.142 CreateQNXEvent**Syntax*****C# prototype***

```
int CreateQNXEvent(Int32 EventNumber, string EventName, out string errstring)
```

Python prototype

```
[errstring] CreateQNXEvent (EventNumber, EventName)
```

Parameters***Input parameters***

(Int32) EventNumber: EventNumber

(string) EventName: EventName

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 CreateQNXEvent command which is used to Run Create Event. Refer to the XPS Programmer's manual to get the command description.

2.2.143 StartEventsAcquisition**Syntax*****C# prototype***

```
int StartEventsAcquisition( out string errstring)
```

Python prototype

```
[errstring] StartEventsAcquisition ()
```

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 StartEventsAcquisition command which is used to Start Events Acquisition. Refer to the XPS Programmer's manual to get the command description.

2.2.144 StopEventsAcquisition**Syntax**

C# prototype

int StopEventsAcquisition(out string errstring)

Python prototype

[errstring] StopEventsAcquisition ()

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 StopEventsAcquisition command which is used to Stop Events Acquisition. Refer to the XPS Programmer's manual to get the command description.

2.2.145 EventTriggerSet**Syntax**

C# prototype

int EventTriggerSet(out string errstring)

Python prototype

[errstring] EventTriggerSet ()

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 EventTriggerSet command which is used to Generate internal event. Refer to the XPS Programmer's manual to get the command description.

2.2.146 ActionListGet

Syntax

C# prototype

```
int ActionListGet(out string ActionList, out string errstring)
```

Python prototype

```
[ActionList, errstring] ActionListGet ()
```

Parameters

Input parameters

None

Output parameters

(string) ActionList: ActionList

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous ActionListGet command which is used to Action list. Refer to the XPS Programmer's manual to get the command description.

2.2.147 ActionExtendedListGet

Syntax

C# prototype

```
int ActionExtendedListGet(out string ActionList, out string errstring)
```

Python prototype

```
[ActionList, errstring] ActionExtendedListGet ()
```

Parameters

Input parameters

None

Output parameters

(string) ActionList: ActionList

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous ActionExtendedListGet command which is used to Action extended list. Refer to the XPS Programmer's manual to get the command description.

2.2.148 APIExtendedListGet

Syntax

C# prototype

```
int APIExtendedListGet(out string Method, out string errstring)
```

Python prototype

```
[Method, errstring] APIExtendedListGet ()
```

Parameters

Input parameters

None

Output parameters

(string) Method: Method

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous APIExtendedListGet command which is used to API method list. Refer to the XPS Programmer's manual to get the command description.

2.2.149 APIListGet

Syntax

C# prototype

```
int APIListGet(out string Method, out string errstring)
```

Python prototype

```
[Method, errstring] APIListGet ()
```

Parameters

Input parameters

None

Output parameters

(string) Method: Method

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous APIListGet command which is used to API method list without extended API. Refer to the XPS Programmer's manual to get the command description.

2.2.150 ErrorListGet

Syntax

C# prototype

```
int ErrorListGet(out string ErrorsList, out string errstring)
```

Python prototype

```
[ErrorsList, errstring] ErrorListGet ()
```

Parameters

Input parameters

None

Output parameters

(string) ErrorsList: ErrorsList

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous ErrorListGet command which is used to Error list. Refer to the XPS Programmer's manual to get the command description.

2.2.151 EventListGet

Syntax

C# prototype

```
int EventListGet(out string EventList, out string errstring)
```

Python prototype

```
[EventList, errstring] EventListGet ()
```

Parameters

Input parameters

None

Output parameters

(string) EventList: EventList

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous EventListGet command which is used to General event list. Refer to the XPS Programmer's manual to get the command description.

2.2.152 GatheringListGet

Syntax

C# prototype

```
int GatheringListGet(out string list, out string errstring)
```

Python prototype

```
[list, errstring] GatheringListGet ()
```

Parameters

Input parameters

None

Output parameters

(string) list: list

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous GatheringListGet command which is used to Gathering type list. Refer to the XPS Programmer's manual to get the command description.

2.2.153 GatheringExtendedListGet

Syntax

C# prototype

```
int GatheringExtendedListGet(out string list, out string errstring)
```

Python prototype

```
[list, errstring] GatheringExtendedListGet ()
```

Parameters

Input parameters

None

Output parameters

(string) list: list

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous GatheringExtendedListGet command which is used to Gathering type extended list. Refer to the XPS Programmer's manual to get the command description.

2.2.154 GatheringExternalListGet

Syntax

C# prototype

```
int GatheringExternalListGet(out string list, out string errstring)
```

Python prototype

```
[list, errstring] GatheringExternalListGet ()
```

Parameters

Input parameters

None

Output parameters

(string) list: list

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous GatheringExternalListGet command which is used to External Gathering type list. Refer to the XPS Programmer's manual to get the command description.

2.2.155 GroupStatusListGet

Syntax

C# prototype

```
int GroupStatusListGet(out string GroupStatusList, out string errstring)
```

Python prototype

```
[GroupStatusList, errstring] GroupStatusListGet ()
```

Parameters

Input parameters

None

Output parameters

(string) GroupStatusList: GroupStatusList

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous GroupStatusListGet command which is used to Group status list. Refer to the XPS Programmer's manual to get the command description.

2.2.156 HardwareInternalListGet

Syntax

C# prototype

```
int HardwareInternalListGet(out string InternalHardwareList, out string errstring)
```

Python prototype

```
[InternalHardwareList, errstring] HardwareInternalListGet ()
```

Parameters

Input parameters

None

Output parameters

(string) InternalHardwareList: InternalHardwareList

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous HardwareInternalListGet command which is used to Internal hardware list. Refer to the XPS Programmer's manual to get the command description.

2.2.157 HardwareDriverAndStageGet

Syntax

C# prototype

```
int HardwareDriverAndStageGet(Int32 PlugNumber, out string DriverName, out string StageName, out string errstring)
```

Python prototype

```
[DriverName, StageName, errstring] HardwareDriverAndStageGet (PlugNumber)
```

Parameters

Input parameters

(Int32) PlugNumber: PlugNumber

Output parameters

(string) DriverName: DriverName

(string) StageName: StageName

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous HardwareDriverAndStageGet command which is used to Smart hardware. Refer to the XPS Programmer's manual to get the command description.

2.2.158 HexapodTrajectoryListGet

Syntax

C# prototype

```
int HexapodTrajectoryListGet(out string list, out string errstring)
```

Python prototype

```
[list, errstring] HexapodTrajectoryListGet ()
```

Parameters

Input parameters

None

Output parameters

(string) list: list

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous HexapodTrajectoryListGet command which is used to Hexapod trajectory type list. Refer to the XPS Programmer's manual to get the command description.

2.2.159 ObjectsListGet

Syntax

C# prototype

```
int ObjectsListGet(out string ObjectsList, out string errstring)
```

Python prototype

```
[ObjectsList, errstring] ObjectsListGet ()
```

Parameters

Input parameters

None

Output parameters

(string) ObjectsList: ObjectsList

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous ObjectsListGet command which is used to Group name and positioner name. Refer to the XPS Programmer's manual to get the command description.

2.2.160 PositionerErrorListGet

Syntax

C# prototype

```
int PositionerErrorListGet(out string PositionerErrorList, out string errstring)
```

Python prototype

```
[PositionerErrorList, errstring] PositionerErrorListGet ()
```

Parameters

Input parameters

None

Output parameters

(string) PositionerErrorList: PositionerErrorList

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous PositionerErrorListGet command which is used to Positioner error list. Refer to the XPS Programmer's manual to get the command description.

2.2.161 PositionerHardwareStatusListGet

Syntax

C# prototype

```
int PositionerHardwareStatusListGet(out string PositionerHardwareStatusList, out string errstring)
```

Python prototype

```
[PositionerHardwareStatusList, errstring] PositionerHardwareStatusListGet ()
```

Parameters

Input parameters

None

Output parameters

(string) PositionerHardwareStatusList: PositionerHardwareStatusList

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous PositionerHardwareStatusListGet command which is used to Positioner hardware status list. Refer to the XPS Programmer's manual to get the command description.

2.2.162 PositionerDriverStatusListGet

Syntax

C# prototype

```
int PositionerDriverStatusListGet(out string PositionerDriverStatusList, out string errstring)
```

Python prototype

```
[PositionerDriverStatusList, errstring] PositionerDriverStatusListGet ()
```

Parameters

Input parameters

None

Output parameters

(string) PositionerDriverStatusList: PositionerDriverStatusList

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous PositionerDriverStatusListGet command which is used to Positioner driver status list. Refer to the XPS Programmer's manual to get the command description.

2.2.163 ReferencingActionListGet

Syntax

C# prototype

```
int ReferencingActionListGet(out string list, out string errstring)
```

Python prototype

```
[list, errstring] ReferencingActionListGet ()
```

Parameters

Input parameters

None

Output parameters

(string) list: list

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous ReferencingActionListGet command which is used to Get referencing action list. Refer to the XPS Programmer's manual to get the command description.

2.2.164 ReferencingSensorListGet

Syntax

C# prototype

```
int ReferencingSensorListGet(out string list, out string errstring)
```

Python prototype

```
[list, errstring] ReferencingSensorListGet ()
```

Parameters

Input parameters

None

Output parameters

(string) list: list

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous ReferencingSensorListGet command which is used to Get referencing sensor list. Refer to the XPS Programmer's manual to get the command description.

2.2.165 GatheringUserDatasGet

Syntax

C# prototype

```
int GatheringUserDatasGet(out double UserData1, out double UserData2, out double
UserData3, out double UserData4, out double UserData5, out double UserData6, out
double UserData7, out double UserData8, out string errstring)
```

Python prototype

```
[UserData1, UserData2, UserData3, UserData4, UserData5, UserData6, UserData7,
UserData8, errstring] GatheringUserDatasGet ()
```

Parameters

Input parameters

None

Output parameters

(double) UserData1: UserData1

(double) UserData2: UserData2

(double) UserData3: UserData3

(double) UserData4: UserData4

(double) UserData5: UserData5

(double) UserData6: UserData6

(double) UserData7: UserData7

(double) UserData8: UserData8

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous GatheringUserDatasGet command which is used to Return UserDatas values. Refer to the XPS Programmer's manual to get the command description.

2.2.166 ControllerMotionKernelPeriodMinMaxGet**Syntax***C# prototype*

```
int ControllerMotionKernelPeriodMinMaxGet(out double MinimumCorrectorPeriod,
out double MaximumCorrectorPeriod, out double MinimumProfilerPeriod, out double
MaximumProfilerPeriod, out double MinimumServitudesPeriod, out double
MaximumServitudesPeriod, out string errstring)
```

Python prototype

```
[MinimumCorrectorPeriod, MaximumCorrectorPeriod, MinimumProfilerPeriod,
MaximumProfilerPeriod, MinimumServitudesPeriod, MaximumServitudesPeriod,
errstring] ControllerMotionKernelPeriodMinMaxGet ()
```

Parameters*Input parameters*

None

Output parameters

(double) MinimumCorrectorPeriod: MinimumCorrectorPeriod
(double) MaximumCorrectorPeriod: MaximumCorrectorPeriod
(double) MinimumProfilerPeriod: MinimumProfilerPeriod
(double) MaximumProfilerPeriod: MaximumProfilerPeriod
(double) MinimumServitudesPeriod: MinimumServitudesPeriod
(double) MaximumServitudesPeriod: MaximumServitudesPeriod
(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous ControllerMotionKernelPeriodMinMaxGet command which is used to Get controller motion kernel min/max periods. Refer to the XPS Programmer's manual to get the command description.

2.2.167 ControllerMotionKernelPeriodMinMaxReset**Syntax***C# prototype*

```
int ControllerMotionKernelPeriodMinMaxReset( out string errstring)
```

Python prototype

```
[errstring] ControllerMotionKernelPeriodMinMaxReset ()
```

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 ControllerMotionKernelPeriodMinMaxReset command which is used to Reset controller motion kernel min/max periods. Refer to the XPS Programmer's manual to get the command description.

2.2.168 TestTCP**Syntax***C# prototype*

int TestTCP(string InputString, out string ReturnString, out string errstring)

Python prototype

[ReturnString, errstring] TestTCP (InputString)

Parameters*Input parameters*

(string) InputString: InputString

Output parameters

(string) ReturnString: ReturnString

(string) errString: The failure reason

Return

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

Description

This function is used to process synchronous TestTCP command which is used to Test TCP/IP transfert. Refer to the XPS Programmer's manual to get the command description.

2.2.169 PrepareForUpdate**Syntax***C# prototype*

int PrepareForUpdate(out string errstring)

Python prototype

[errstring] PrepareForUpdate ()

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 PrepareForUpdate command which is used to Kill QNX processes for firmware update. Refer to the XPS Programmer's manual to get the command description.

3.0 Examples

3.1 Python Script

```

=====
#
# Newport Proprietary and Confidential           Newport Corporation 2011
#
# No part of this file in any format, with or without modification
# shall be used, copied or distributed without the express written
# consent of Newport Corporation.
#
# Description: This is a sample Python Script to illustrate how to
execute
# "query" commands.
=====

#=====
#Initialization Start The script within Initialization Start and
#Initialization End is needed for #properly
#Command Interface DLL for HXP #instrument. The user should copy this
code as
#is and specify correct paths here.
import sys
import time

#Command Interface DLL can be found here.
sys.path.append(r'C:\Program Files (x86)\Newport\MotionControl\HXP\Bin')

# The CLR module provide functions for interacting with the underlying
# .NET runtime
import clr

# Add reference to assembly and import names from namespace (IronPython)
clr.AddReferenceToFile("Newport.HXP.CommandInterface.dll")
from CommandInterface HXP import *

import System
=====

# Instrument Initialization
# The key should have double slashes since
# (one of them is escape character)
address="192.168.33.3"
port=5001

# Create an HXP instance
hxp = HXP()

print '----- General data -----'
# Connect and open a socket
result = hxp.OpenInstrument(address, port, 1000)
if result == 0 :
    print 'Connection ', address, ":", port, " => Successful"
else:
    print 'Connection ', address, ":", port, " => failure ", result

# Get controller revision information
result, response, errString = hxp.FirmwareVersionGet()
if result == 0 :
    print 'Controller version: ', response
else:
    print 'Error=>',errString

```

```

# Get object list
print '----- Object list -----'
result, response, errString = hxp.ObjectsListGet()
objectList = response.split(';')
nbObjects = len(objectList)
if result == 0 :
    for i in range(nbObjects):
        print i+1, ') ', objectList[i]
else:
    print 'Error=>', result, " : ", errString

# Get GPIO analog gain
print '----- GPIO analog gain -----'
from System import Array
strGpioArray = Array[str](['GPIO2.ADC1', 'GPIO2.ADC2', 'GPIO2.ADC3'])
nbItems = len(strGpioArray)
result, responseArray, errString = hxp.GPIOAnalogGainGet(strGpioArray)
if result == 0 :
    for i in range(nbItems):
        print i+1, ') Analog Gain ', strGpioArray[i], " = ",
responseArray[i]
else:
    print 'Error=>', result, " : ", errString

# Get Controller Status
print '----- Controller Status -----'
result, response, errString = hxp.ControllerStatusGet()
if result == 0 :
    print 'Controller Status=>', response
else:
    print 'Error=> ', result, " : HXP error ", errString

print '----- End of script -----'

# unregister TCP IP server
hxp.CloseInstrument();

```

3.2 C#

```

#region Constants
const int DEFAULT_TO = 1000; // timeout in milliseconds
const int DEFAULT_PORT = 5001;
const string DEFAULT_ADDRESS = "192.168.33.3";
#endregion Constants

#region Members
/// <summary>
/// Object of HXP Command Interface
/// </summary>
HXP m_hxpInterface;
/// <summary>
/// Controller's version
/// </summary>
string m_controllerVersion = string.Empty;
#endregion Members

/// <summary>
/// This function allows checking the HXP communication.
/// Open the communication, get the controller's version and
close
/// the communication
/// </summary>
/// <param name="deviceKey">The device key.</param>
/// <param name="caption">The window caption.</param>
public bool CheckCommunication (string deviceKey, int port)
{
    bool startSuccessfull = false;
    int returnValue;
    string err = string.Empty;
    m_controllerVersion = string.Empty;

    try
    {
        // Create HXP instance
        m_hxpInterface = new HXP();
        if (m_hxpInterface != null)
        {
            // HXP Connection
            returnValue = m_hxpInterface.
OpenInstrument(IPAddress, IPport, DEFAULT_TO)
            if (returnValue == 0)
            {
                string str = string.Empty;

                // Get HXP controller's version
                int res = m_hxpInterface.FirmwareVersionGet(out
str, out err);

                if (res == CommandInterface.HXP.FAILURE)
                {
                    labelControllerVersion.Text = "Failure: " +
err;

                    startSuccessfull = false;
                }
                else
                {
                    m_controllerVersion = str.Trim();
                    labelControllerVersion.Text =
m_controllerVersion;

                    startSuccessfull = true;
                }
            }
        }

        // HXP disconnection
        m_hxpInterface.CloseInstrument();
    }
}

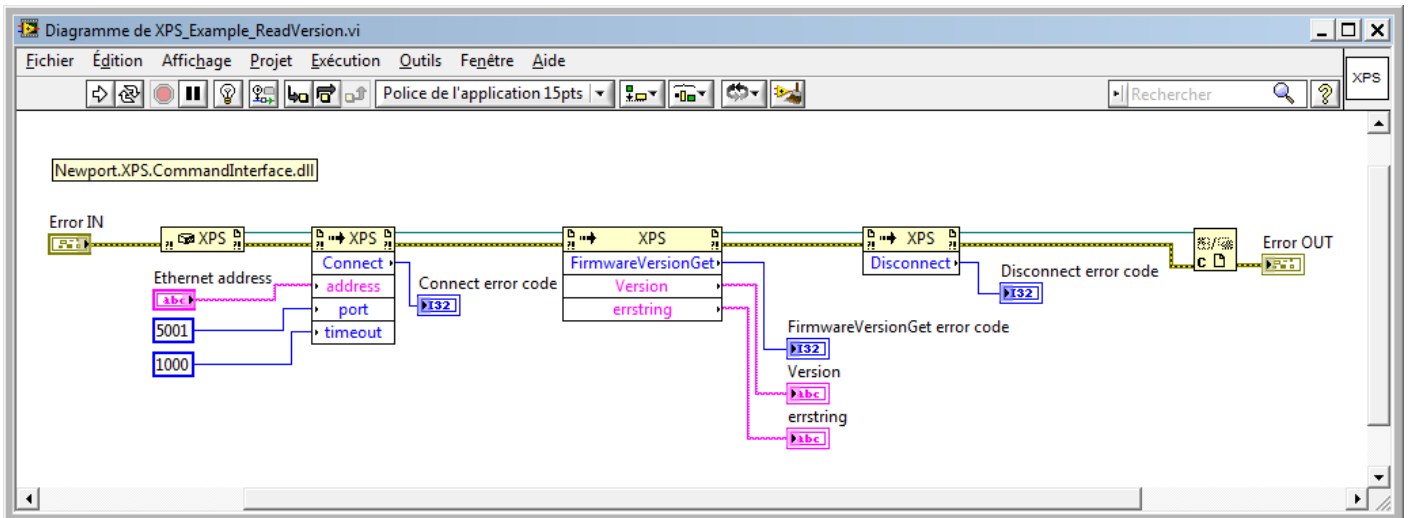
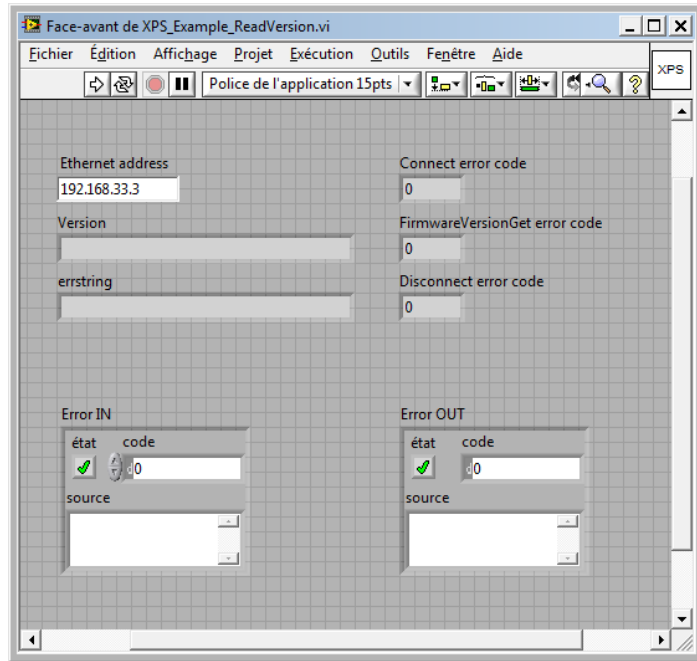
```



```
    }  
    catch (Exception e)  
    {  
        startSuccessful = false;  
        MessageBox.Show("CheckCommunication error: " +  
e.Message);  
    }  
    return startSuccessful;  
}
```

3.3 LabVIEW

The .NET component named “Newport.HXP.CommandInterface” can be used with LabVIEW.





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