

OMNIC Paradigm SDK API Reference

IRemoteParadigm type

Namespace

ParadigmLib

Summary

Functionality from Paradigm that is available to the SDK

AlignSpectrometer() method

Summary

This command will perform a Spectrometer alignment.

Returns

The Retval property of the ParadigmResult object will contain an object of type SpectrometerAlignInfo. This SpectrometerAlignInfo object contains an 'AlignState' enum as well as a 'AlignInterferogramDV' string.

Parameters

This method has no parameters.

BaselineCorrect(measurementGuid,polynomialOrder,numberOfIterations) method

Summary

This command will retrieve a spectrum associated with the baseline corrected measurement passed in via Guid



Returns

Spectrum - Spectral data object of baseline corrected measurement

Parameters

Name	Type	Description
measurementGuid	System.Guid	Guid associated with the measurement to be baseline corrected
polynomialOrder	System.Int32	The desired polynomial order of the baseline correction
numberOfIterations	System.Int32	The desired number of iterations of the baseline correction

CalibrateLaser() method

Summary

Attempts to calibrate the laser associated with the instrument

Returns

ParadigmResult object containing a boolean success value and a string Msg containing any errors

Parameters

This method has no parameters.

CancelCollectInProgress() method

Summary

The stop collect command will attempt to stop the collect currently in progress

Returns

ParadigmResult object containing a boolean success value and a string Msg containing any errors

Parameters

This method has no parameters.



CloseConnection() method

Summary

Closes the connection to the Paradigm backend.

Parameters

This method has no parameters.

DoAdvancedATRCorrection(spectrumId,numberOfBounces,angleOfIncidenceDegrees,refra method

Summary

The DoAdvancedATRCorrection command will perform an ATR correction on the spectrum you specify.

Returns

Returns the ATR corrected spectrum.

Parameters

Name	Type	Description
spectrumId	System.Guid	The GUID of the spectrum to be corrected.
numberOfBounces	System.Int32	The number of reflections for the ATR.
angleOfIncidenceDegrees	System.Double	The angle of incidence, in degrees.
refractiveIndex	System.Double	The refractive index.
ATRCrystalType	System.String	The crystal type for the ATR. One of None, NaCl, KBr, CsI, CaF2, BaF2, AgCl, ZnS, Sapphire, Amtir, Ge, ZnSe, Si, CdTe, Diamond, KrS5, BaFl, Polyethylene, Diamond_ZnSe, Diamond_KRS5

GetInterferograms(sampleId,includeBackground) method



Summary

Retrieve the interferograms (ifgs) that were used to produce a spectrum.

Returns

List of ifgs that contains the sample ifg (and then background ifg if request)

Parameters

Name	Type	Description
sampleId	System.Guid	Guid of the sample
includeBackground	System.Boolean	Whether to also retrieve the ifg for the background spectrum

GetNamedParamsList() method

Summary

The GetNamedParamsList command will retrieve a list of all named collect parameter settings. These named collect parameter settings can be created in the Paradigm client.

Returns

ParadigmResult<List < string > > of parameter settings names as strings

Parameters

This method has no parameters.

GetStatus() method

Summary

The GetStatus command will retrieve active instrument information, software versioning information, as well as database connectivity information.

Returns

ParadigmResult{IStatusInfo} - Current status of connection to Paradigm



Parameters

This method has no parameters.

ImportParameterSettingsFile() method

Summary

Takes in a filepath of a .exp settings file and converts the setting configuration in the file to an explicit named parameter setting in the paradigm backend.

Returns

ParadigmResult object containing a boolean success value and a string Msg containing any errors

Parameters

This method has no parameters.

OpenConnection() method

Summary

After creating an instance of the RemoteParadigm object this command must be called to initiate communication with our backend services.

Returns

Bool - Whether or not communication was successfully established.

Parameters

This method has no parameters.

StartBackgroundMeasurement(paramsName,title,callback) method

Summary

The StartBackgroundMeasurement command will initiate the collection of a background measurement on the instrument. Progress updates and the final spectrum data will be passed to the given callback function. If no callback function is passed in, no updates will be provided and the spectrum will be returned upon completion of the measurement.



Returns

ParadigmResult object containing a boolean success value and a string Msg containing any errors

Parameters

Name	Type	Description
paramsName	System.String	Name of parameter setting to use, see <code>GetNamedParamsList</code>
title	System.String	Title of the measurement being collected
callback	ParadigmLib.MeasurementEventHandler	(Optional) Handler function you want executed on collection updates and completion

StartSampleMeasurement(paramsName,title,callback) method

Summary

The StartSampleMeasurement command will initiate the collection of a sample measurement on the instrument. Progress updates and the final spectrum data will be passed to the given callback function. If no callback function is passed in, no updates will be provided and the spectrum will be returned upon completion of the measurement.

Returns

ParadigmResult object containing a boolean success value and a string Msg containing any errors

Parameters

Name	Type	Description
paramsName	System.String	Name of parameter setting to use, see <code>GetNamedParamsList</code>
title	System.String	Title of the measurement being collected
callback	ParadigmLib.MeasurementEventHandler	(Optional) Handler function you want executed on collection updates and completion

MeasurementEvent type



Namespace

ParadigmLib

Summary

Events that occur when making a measurement on the instrument.

MeasurementEventHandler type

Namespace

ParadigmLib

Summary

Delegate that handles measurement events such as progress notifications and the measurement complete event.

Parameters

Name	Type	Description
evt	T:ParadigmLib.MeasurementEventHandler	Collection event that triggered this delegate call

ParadigmResult type

Namespace

ParadigmLib

Summary

Msg property

Summary

Success property



Summary

ParadigmResult`1 type

Namespace

ParadigmLib

Summary

Generic Types

Name	Description
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Msg property

Summary

RetVal property

Summary

Success property

Summary

RemoteParadigm type

Namespace

ParadigmLib



Summary

Inherit from parent.

#ctor() constructor

Summary

Default constructor

Parameters

This constructor has no parameters.

AlignSpectrometer() method

Summary

Inherit from parent.

Parameters

This method has no parameters.

BaselineCorrect() method

Summary

Inherit from parent.

Parameters

This method has no parameters.

CalibrateLaser() method

Summary

Inherit from parent.



Parameters

This method has no parameters.

CancelCollectInProgress() method

Summary

Inherit from parent.

Parameters

This method has no parameters.

CloseConnection() method

Summary

Inherit from parent.

Parameters

This method has no parameters.

Dispose() method

Summary

Implementation of IDisposable interface that closes the connection to the backend

Parameters

This method has no parameters.

DoAdvancedATRCorrection() method

Summary

Inherit from parent.



Parameters

This method has no parameters.

GetInterferograms() method

Summary

Inherit from parent.

Parameters

This method has no parameters.

GetNamedParamsList() method

Summary

Inherit from parent.

Parameters

This method has no parameters.

GetStatus() method

Summary

Inherit from parent.

Parameters

This method has no parameters.

ImportParameterSettingsFile() method

Summary

Inherit from parent.



Parameters

This method has no parameters.

OpenConnection() method

Summary

Inherit from parent.

Parameters

This method has no parameters.

StartBackgroundMeasurement() method

Summary

Inherit from parent.

Parameters

This method has no parameters.

StartSampleMeasurement() method

Summary

Inherit from parent.

Parameters

This method has no parameters.

