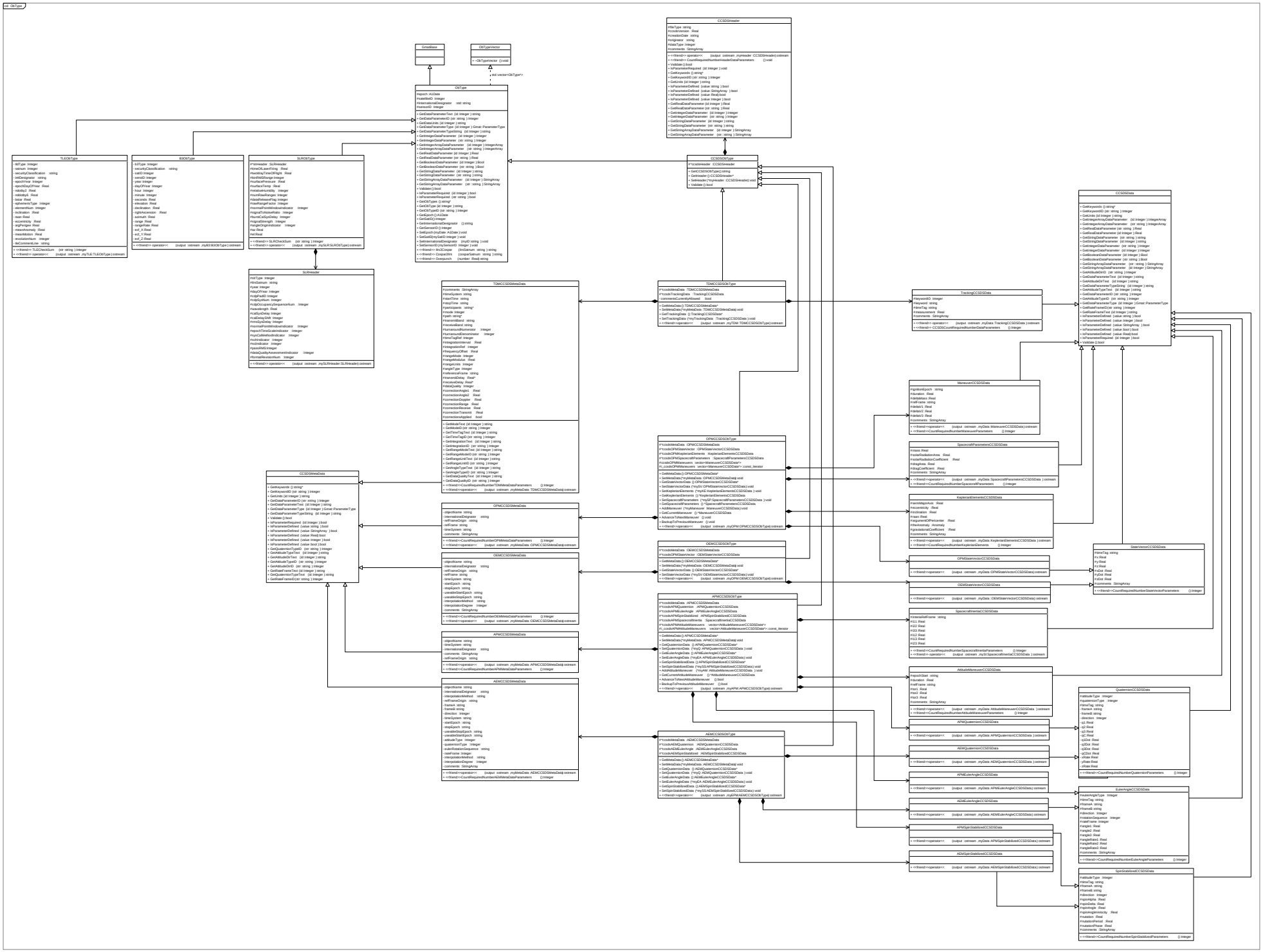
id: ObType
GmsBase
ObTypeVector
+ ~ ObTypeVector ():void
std::vector<ObType*>
ObType
#epoch :AJDate
#satellite0 :Integer
#InternationalDesignator :std::string
#sensorID :Integer
+ GetDataParameterText (id :Integer):string
+ GetDataParameterID (str :string):Integer
+ GetDataUnits (id :Integer):string
+ GetDataParameterType (id :Integer):Gmat::ParameterType
+ GetDataParameterTypeString (id :Integer):string
+ GetIntegerDataParameter (id :Integer):Integer
+ GetIntegerDataParameter (str :string):Integer
+ GetIntegerArrayDataParameter (id :Integer):IntegerArray
+ GetIntegerArrayDataParameter (str :string):IntegerArray
+ GetRealDataParameter (id :Integer):Real
+ GetRealDataParameter (str :string):Real
+ GetBooleanDataParameter (id :Integer):bool
+ GetBooleanDataParameter (str :string):bool
+ GetStringDataParameter (id :Integer):string
+ GetStringDataParameter (str :string):string
+ GetStringArrayDataParameter (id :Integer):StringArray
+ GetStringArrayDataParameter (str :string):StringArray
+ Validate ():bool
isParameterRequired (id :Integer):bool
isParameterRequired (str :string):bool
GetObTypes ():string*
GetObType (id :Integer):string
GetObTypeID (str :string):Integer
GetEpoch ():A1Date
GetSatID():Integer
GetInternationalDesignator ():string
GetSensorID ():Integer
SetEpoch(myDate :A1Date):void
SetSatID(mySatID :Integer):void
SetInternationalDesignator (myID :string):void
SetSensorID(mySensorID :Integer):void
+ ~friend:~ IsInCompar (:IntSatnum :string):string
+ ~friend:~ Compar2Irs (:cospar/Satnum :string):string
+ ~friend:~ Overpunch (number :Real):string
CCSDSHeader
#fileType :string
#ccsdsVersion :Real
#creationDate :string
#originator :string
#dataType :Integer
#comments :StringArray
+ ~friend:~ operator<< (output :ostream ,myHeader :CCSDSHeader):ostream
+ ~friend:~ CountRequiredNumberHeaderDataParameters ():void
+ IsValidate ():bool
+ isParameterRequired (id :Integer):void
+ GetKeywords ():string*
+ GetKeywordID (str :string):Integer
+ GetUnits (id :Integer):string
+ isParameterDefined (value :string):bool
+ isParameterDefined (value :StringArray):bool
+ isParameterDefined (value :Real):bool
+ isParameterDefined (value :Integer):bool
+ GetRealDataParameter (id :Integer):Real
+ GetRealDataParameter (str :string):Real
+ GetIntegerDataParameter (id :Integer):Integer
+ GetIntegerDataParameter (str :string):Integer
+ GetStringDataParameter (id :Integer):string
+ GetStringDataParameter (str :string):string
+ GetStringArrayDataParameter (id :Integer):StringArray
+ GetStringArrayDataParameter (str :string):StringArray
TLEObType
- tlcType :Integer
- satnum :Integer
- securityClassification :string
- intlDesignator :string
- epochYear :Integer
- epochDayOfYear :Real
- ndot8by2 :Real
- nddot6by6 :Real
- bstar :Real
- ephemerisType :Integer
- elementNum :Integer
- inclination :Real
- raan :Real
- eccentricity :Real
- argPerigee :Real
- meanAnomaly :Real
- meanMotion :Real
- revolutionNum :Integer
- tleCommentLine :string
+ ~friend:~ TLECheckSum (str :string):Integer
+ ~friend:~ operator<< (output :ostream ,myTLE:TLEObType):ostream
IEOBType
- tcBType :Integer
- securityClassification :string
- satID :Integer
- sensor :Integer
- year :Integer
- dayOfYear :Integer
- hour :Integer
- minute :Integer
- secondsi :Real
- elevation :Real
- declination :Real
- rightAscension :Real
- azimuth :Real
- range :Real
- rangeRate :Real
- ecf_x :Real
- ecf_Y :Real
- ecf_Z :Real
+ ~friend:~ operator<< (output :ostream ,myIEOBObType):ostream
SLROBType
#TleHeader :SLRHeader
#timeOfLaserFring :Real
#tleMidyTimeOfFlight :Real
#tleMidyTimeOfFlight :Real
#surfacePressure :Real
#surfaceTemp :Real
#relativeHumidity :Integer
#numRawRanges :Integer
#stationReleaseFlag :Integer
#rawRangeFactor :Integer
#normalPointWindowIndicator :Integer
#signalToNoiseRatio :Integer
#launchCalibrDelay :Integer
#signalStrength :Integer
#rangeOriginIndicator :Integer
#sac :Real
#sd :Real
+ ~friend:~ SLRCheckSum (str :string):Integer
+ ~friend:~ operator<< (output :ostream ,mySLRSLROBType):ostream
SLRHeader
#sicType :Integer
#SinSatnum :string
#year :Integer
#dayOfYear :Integer
#cspFlyaBD :Integer
#cspSysNum :Integer
#cspOccupancySequenceNum :Integer
#haveLength :Real
#calSysDelay :Integer
#calDelayShift :Integer
#mmSysDelay :Integer
#normalPointWindowIndicator :Integer
#epochTimeScaleIndicator :Integer
#sysCalMethodIndicator :Integer
#calibrationMode :Integer
#tcBIndicator :Integer
#passRMS:Integer
#dataQualityAssessmentIndicator :Integer
#formatRevisionNum :Integer
+ ~friend:~ operator<< (output :ostream ,mySLRHeader:SLRHeader):ostream
CCSDSObType
#TleHeader :CCSDSHeader
+ ~ GetCCSDSObType():string
+ GetHeader () :CCSDSHeader*
+ SetHeader(*myHeader :CCSDSHeader):void
+ Validate () :bool
TDMCCSDSMetaData
#comments :StringArray
#timeSystem :string
#startTime :string
#stopTime :string
#participants :string*
#mode :Integer
#path :string*
#transmitBand :string
#receiveBand :string
#turnaroundNumerator :Integer
#turnaroundDenominator :Integer
#timeTagBef :Integer
#integrationInterval :Real
#integrationRef :Integer
#frequencyOffset :Real
#rangeMode :Integer
#rangeModulus :Real
#rangeUnits :Integer
#angleType :Integer
#referenceFrame :string
#transmitDelay :Real*
#receiveDelay :Real*
#dataQuality :Integer
#correctionAngle1 :Real
#correctionAngle2 :Real
#correctionDoppler :Real
#correctionRange :Real
#correctionReceive :Real
#correctionTransmit :Real
#correctionsApplied :bool
+ GetMetaDataText (id :Integer):string
+ GetMetaDataID (str :string):Integer
+ GetTimeTagText (id :Integer):string
+ GetTimeTagID (str :string):Integer
+ GetIntegrationText (id :Integer):string
+ GetIntegrationID (str :string):Integer
+ GetRangeModeText (id :Integer):string
+ GetRangeModeID (str :string):Integer
+ GetRangeUnitText (id :Integer):string
+ GetRangeUnitID (str :string):Integer
+ GetAngleTypeText (id :Integer):string
+ GetAngleTypeID (str :string):Integer
+ GetDataQualityText (id :Integer):string
+ GetDataQualityID (str :string):Integer
+ ~friend:~ CountRequiredNumberTDMMetaDataParameters ():Integer
+ ~friend:~ operator<< (output :ostream ,myMetaData :TDMCCSDSMetaData):ostream
TDMCCSDSObType
#CcsdsMetaData :TDMCCSDSMetaData
#CcsdsTrackingData :TrackingCCSDSData
- commandCurrentAllowed :bool
+ GetMetaData () :TDMCCSDSMetaData*
+ SetMetaData(*myMetaData :TDMCCSDSMetaData):void
+ GetTrackingData () :TrackingCCSDSData*
+ SetTrackingData (*myTrackingData :TrackingCCSDSData):void
+ ~friend:~ operator<< (output :ostream ,myTDM :TDMCCSDSObType):ostream
TrackingCCSDSData
#keywordID :Integer
#keyword :string
#timeTag :string
#measurement :Real
#comments :StringArray
+ ~friend:~ operator<< (output :ostream ,myData :TrackingCCSDSData):ostream
+ ~friend:~ CCSDSCountRequiredNumberDataParameters ():Integer
CCSDSData
+ GetKeywords ():string*
+ GetKeywordID (str :string):Integer
+ GetUnits (id :Integer):string
+ GetIntegerArrayDataParameter (id :Integer):IntegerArray
+ GetIntegerArrayDataParameter (str :string):IntegerArray
+ GetRealDataParameter (str :string):Real
+ GetRealDataParameter (id :Integer):Real
+ GetStringDataParameter (str :string):string
+ GetStringDataParameter (id :Integer):string
+ GetIntegerDataParameter (str :string):Integer
+ GetIntegerDataParameter (id :Integer):Integer
+ GetBooleanDataParameter (id :Integer):bool
+ GetBooleanDataParameter (str :string):bool
+ GetStringArrayDataParameter (str :string):StringArray
+ GetStringArrayDataParameter (id :Integer):StringArray
+ GetAttitudeID() (str :string):Integer
+ GetDataParameterText (id :Integer):string
+ GetAttitudeID(int id) (id :Integer):string
+ GetDataParameterID (str :string):Integer
+ GetAttitudeTypeText (id :Integer):string
+ GetDataParameterID (str :string):Integer
+ GetAttitudeTypeID (str :string):Integer
+ GetDataParameterType (id :Integer):Gmat::ParameterType
+ GetBaseFrameID(str :string):Integer
+ GetBaseFrameText (id :Integer):string
+ isParameterDefined (value :string):bool
+ isParameterDefined (value :Integer):bool
+ isParameterDefined (value :StringArray):bool
+ isParameterDefined (value :bool):bool
+ isParameterDefined (value :Real):bool
+ isParameterRequired (id :Integer):bool
+ Validate () :bool
ManeuverCCSDSData
#rightNorEpoch :string
#duration :Real
#deltaMass :Real
#deltaV1 :Real
#deltaV2 :Real
#deltaV3 :Real
#comments :StringArray
+ ~friend:~ operator<< (output :ostream ,myData :ManeuverCCSDSData):ostream
+ ~friend:~ CountRequiredNumberManeuverParameters ():Integer
OPMCCSDSObType
#CcsdsMetaData :OPMCCSDSMetaData
#CcsdsOPMStateVector :OPMStateVectorCCSDSData
#CcsdsOPMKeplerianElements :KeplerianElementsCCSDSData
#CcsdsOPMSpacecraftParameters :SpacecraftParametersCCSDSData
#CcsdsOPMManeuvers :vector<ManeuverCCSDSData*>
#i_CcsdsOPMManeuvers :vector<ManeuverCCSDSData*>::const_iterator
+ GetMetaData () :OPMCCSDSMetaData*
+ SetMetaData(*myMetaData :OPMCCSDSMetaData):void
+ GetStateVectorData () :OPMStateVectorCCSDSData*
+ SetStateVectorData (*mySV :OPMStateVectorCCSDSData):void
+ SetKeplerianElements (*myKE :KeplerianElementsCCSDSData):void
+ GetKeplerianElements () :KeplerianElementsCCSDSData
+ SetSpacecraftParameters (*mySP :SpacecraftParametersCCSDSData):void
+ GetSpacecraftParameters () :SpacecraftParametersCCSDSData
+ AddManeuver (*myManeuver :ManeuverCCSDSData):void
+ GetCurrentManeuver () :ManeuverCCSDSData
+ AdvanceToNextManeuver () :void
+ BackupToPreviousManeuver () :void
+ ~friend:~ operator<< (output :ostream ,myOPM :OPMCCSDSObType):ostream
SpacecraftParametersCCSDSData
#mass :Real
#solarRadiationArea :Real
#solarRadiationCoefficient :Real
#dragArea :Real
#dragCoefficient :Real
#comments :StringArray
+ ~friend:~ operator<< (output :ostream ,myData :SpacecraftParametersCCSDSData):ostream
+ ~friend:~ CountRequiredNumberSpacecraftParameters ():Integer
KeplerianElementsCCSDSData
#meanMotionAuto :Real
#eccentricity :Real
#inclination :Real
#raan :Real
#argumentOfPericenter :Real
#theAnomaly :Anomaly
#gravitationalCoefficient :Real
#comments :StringArray
+ ~friend:~ operator<< (output :ostream ,myData :KeplerianElementsCCSDSData):ostream
+ ~friend:~ CountRequiredNumberKeplerianElements ():Integer
StateVectorCCSDSData
#timeTag :string
#x :Real
#y :Real
#z :Real
#xDot :Real
#yDot :Real
#zDot :Real
#comments :StringArray
+ ~friend:~ CountRequiredNumberStateVectorParameters ():Integer
OPMCCSDSMetaData
- objectName :string
- internationalDesignator :string
- refFrame :string
- timeSystem :string
- comments :StringArray
+ ~friend:~ CountRequiredNumberOPMMetaDataParameters ():Integer
+ ~friend:~ operator<< (output :ostream ,myMetaData :OPMCCSDSMetaData):ostream
OPMCCSDSObType
#CcsdsMetaData :OPMCCSDSMetaData
#CcsdsOPMStateVector :OPMStateVectorCCSDSData
+ GetMetaData () :OPMCCSDSMetaData*
+ SetMetaData(*myMetaData :OPMCCSDSMetaData):void
+ GetStateVectorData () :OPMStateVectorCCSDSData*
+ SetStateVectorData (*mySV :OPMStateVectorCCSDSData):void
+ ~friend:~ operator<< (output :ostream ,myOPM :OPMCCSDSObType):ostream
OPMStateVectorCCSDSData
+ ~friend:~ operator<< (output :ostream ,myData :OPMStateVectorCCSDSData):ostream
OEMCCSDSMetaData
- objectName :string
- internationalDesignator :string
- refFrame :string
- timeSystem :string
- startEpoch :string
- stopEpoch :string
- usableStartEpoch :string
- usableStopEpoch :string
- interpolationMethod :string
- interpolationDegree :Integer
- comments :StringArray
+ ~friend:~ CountRequiredNumberOEMMetaDataParameters ():Integer
+ ~friend:~ operator<< (output :ostream ,myMetaData :OEMCCSDSMetaData):ostream
OEMCCSDSObType
#CcsdsMetaData :OEMCCSDSMetaData
#CcsdsOPMStateVector :OEMStateVectorCCSDSData
+ GetMetaData () :OEMCCSDSMetaData*
+ SetMetaData(*myMetaData :OEMCCSDSMetaData):void
+ GetStateVectorData () :OEMStateVectorCCSDSData*
+ SetStateVectorData (*mySV :OEMStateVectorCCSDSData):void
+ ~friend:~ operator<< (output :ostream ,myOPM :OEMCCSDSObType):ostream
OEMStateVectorCCSDSData
+ ~friend:~ operator<< (output :ostream ,myData :OEMStateVectorCCSDSData):ostream
SpacecraftInertiaCCSDSData
#inertiaRefFrame :string
#11 :Real
#22 :Real
#33 :Real
#12 :Real
#13 :Real
#23 :Real
+ ~friend:~ CountRequiredNumberSpacecraftInertiaParameters ():Integer
+ ~friend:~ operator<< (output :ostream ,mySI :SpacecraftInertiaCCSDSData):ostream
CCSDSMetaData
+ GetKeywords ():string*
+ GetKeywordID (str :string):Integer
+ GetUnits (id :Integer):string
+ GetDataParameterID (str :string):Integer
+ GetDataParameterText (id :Integer):string
+ GetDataParameterType (id :Integer):Gmat::ParameterType
+ GetDataParameterTypeString (id :Integer):string
+ Validate () :bool
+ isParameterRequired (id :Integer):bool
+ isParameterDefined (value :string):bool
+ isParameterDefined (value :StringArray):bool
+ isParameterDefined (value :Real):bool
+ isParameterDefined (value :Integer):bool
+ isParameterDefined (value :bool):bool
+ GetQuaternionTypeID (str :string):Integer
+ GetAttitudeTypeText (id :Integer):string
+ GetAttitudeTypeID (str :string):Integer
+ GetAttitudeSrcID (str :string):Integer
+ GetBaseFrameText (id :Integer):string
+ GetQuaternionTypeText (id :Integer):string
+ GetBaseFrameID(str :string):Integer
APMCCSDSMetaData
- objectName :string
- timeSystem :string
- internationalDesignator :string
- comments :StringArray
- refFrameOrigin :string
+ ~friend:~ operator<< (output :ostream ,myMetaData :APMCCSDSMetaData):ostream
+ ~friend:~ CountRequiredNumberAPMMetaDataParameters ():Integer
APMCCSDSObType
#CcsdsMetaData :APMCCSDSMetaData
#CcsdsAPMQuaternion :APMQuaternionCCSDSData
#CcsdsAPMEulerAngle :APMEulerAngleCCSDSData
#CcsdsAPMSpinStabilized :APMSpinStabilizedCCSDSData
#CcsdsAPMSpacecraftInertia :SpacecraftInertiaCCSDSData
#CcsdsAPMAttitudeManeuvers :vector<AttitudeManeuverCCSDSData*>
#i_CcsdsAPMAttitudeManeuvers :vector<AttitudeManeuverCCSDSData*>::const_iterator
+ GetMetaData () :APMCCSDSMetaData*
+ SetMetaData(*myMetaData :APMCCSDSMetaData):void
+ GetQuaternionData () :APMQuaternionCCSDSData*
+ SetQuaternionData (*myQ :APMQuaternionCCSDSData):void
+ GetEulerAngleData () :APMEulerAngleCCSDSData*
+ SetEulerAngleData (*myEA :APMEulerAngleCCSDSData):void
+ GetSpinStabilizedData () :APMSpinStabilizedCCSDSData*
+ SetSpinStabilizedData (*mySS:APMSpinStabilizedCCSDSData):void
+ AddAttitudeManeuver (*myAM :AttitudeManeuverCCSDSData):void
+ GetCurrentAttitudeManeuver () :AttitudeManeuverCCSDSData
+ AdvanceToNextAttitudeManeuver () :bool
+ BackupToPreviousAttitudeManeuver () :bool
+ ~friend:~ operator<< (output :ostream ,myAPM :APMCCSDSObType):ostream
AttitudeManeuverCCSDSData
#epochStart :string
#duration :Real
#refFrame :string
#rot1 :Real
#rot2 :Real
#rot3 :Real
- direction :Integer
#comments :StringArray
+ ~friend:~ operator<< (output :ostream ,myData :AttitudeManeuverCCSDSData):ostream
+ ~friend:~ CountRequiredNumberAttitudeManeuverParameters ():Integer
APMQuaternionCCSDSData
+ ~friend:~ operator<< (output :ostream ,myData :APMQuaternionCCSDSData):ostream
AEMCCSDSMetaData
- objectName :string
- internationalDesignator :string
- interpolationMethod :string
- refFrameOrigin :string
- frameA :string
- frameB :string
- direction :Integer
- timeSystem :string
- startEpoch :string
- stopEpoch :string
- usableStartEpoch :string
- usableStopEpoch :string
- interpolationMethod :string
- attitudeType :Integer
- quaternionType :Integer
- eulerRotationSequence :string
- coreFrame :Integer
- interpolationMethod :string
- interpolationDegree :Integer
- comments :StringArray
+ ~friend:~ operator<< (output :ostream ,myMetaData :AEMCCSDSMetaData):ostream
+ ~friend:~ CountRequiredNumberAEMMetaDataParameters ():Integer
AEMCCSDSObType
#CcsdsMetaData :AEMCCSDSMetaData
#CcsdsAEMQuaternion :AEMQuaternionCCSDSData
#CcsdsAEMEulerAngle :AEMEulerAngleCCSDSData
#CcsdsAEMSpinStabilized :AEMSpinStabilizedCCSDSData
+ GetMetaData () :AEMCCSDSMetaData*
+ SetMetaData(*myMetaData :AEMCCSDSMetaData):void
+ GetQuaternionData () :AEMQuaternionCCSDSData*
+ SetQuaternionData (*myQ :AEMQuaternionCCSDSData):void
+ GetEulerAngleData () :AEMEulerAngleCCSDSData*
+ SetEulerAngleData (*myEA :AEMEulerAngleCCSDSData):void
+ GetSpinStabilizedData () :AEMSpinStabilizedCCSDSData*
+ SetSpinStabilizedData (*mySS:AEMSpinStabilizedCCSDSData):void
+ ~friend:~ operator<< (output :ostream ,myAPM:AEMCCSDSObType):ostream
APMEulerAngleCCSDSData
+ ~friend:~ operator<< (output :ostream ,myData :APMEulerAngleCCSDSData):ostream
AEMEulerAngleCCSDSData
+ ~friend:~ operator<< (output :ostream ,myData :AEMEulerAngleCCSDSData):ostream
APMSpinStabilizedCCSDSData
+ ~friend:~ operator<< (output :ostream ,myData :APMSpinStabilizedCCSDSData):ostream
AEMSpinStabilizedCCSDSData
+ ~friend:~ operator<< (output :ostream ,myData :AEMSpinStabilizedCCSDSData):ostream
QuaternionCCSDSData
#attitudeType :Integer
#quaternionType :Integer
#timeTag :string
- frameA :string
- frameB :string
- direction :Integer
- q1 :Real
- q2 :Real
- q3 :Real
- q0 :Real
- q1Dot :Real
- q2Dot :Real
- q3Dot :Real
- q0Dot :Real
- xRate :Real
- yRate :Real
- zRate :Real
+ ~friend:~ CountRequiredNumberQuaternionParameters ():Integer
EulerAngleCCSDSData
#eulerAngleType :Integer
#timeTag :string
#frameA :string
#frameB :string
#direction :Integer
#rotationSequence :Integer
#coreFrame :Integer
#angle1 :Real
#angle2 :Real
#angle3 :Real
#angle1Real1 :Real
#angle2Real1 :Real
#angle3Real1 :Real
#comments :StringArray
+ ~friend:~ CountRequiredNumberEulerAngleParameters ():Integer
SpinStabilizedCCSDSData
#attitudeType :Integer
#timeTag :string
#frameA :string
#frameB :string
#direction :Integer
#spinAlpha :Real
#spinDelta :Real
#spinAngle :Real
#spinAngleVelocity :Real
#nutation :Real
#nutationPeriod :Real
#nutationPhase :Real
#comments :StringArray
+ ~friend:~ CountRequiredNumberSpinStabilizedParameters ():Integer