

# OpcAnalogItemNode<T> Class

**Namespace:** Opc.UaFx

**Assemblies:** Opc.UaFx.Advanced.dll

Defines a generic implementation of the [OpcAnalogItemNode](#).

**C#**

```
public class OpcAnalogItemNode<T> : OpcAnalogItemNode, IOpcNode, IOpcNodeInfo
```

**Inheritance** [Object](#) > [OpcNode](#) > [OpcInstanceNode](#) > [OpcVariableNode](#) > [OpcDataVariableNode](#) > [OpcDataItemNode](#) > [OpcAnalogItemNode](#) > [OpcAnalogItemNode<T>](#)

**Implements** [IOpcNode](#), [IOpcNodeInfo](#)

## Remarks

The analog item node is a specialization of the [OpcDataItemNode](#) there its reference type is [HasComponent](#) and its type definition is [AnalogItem](#).

## Constructors

Name	Description
<a href="#">OpcAnalogItemNode`1</a> (IOpcNode, OpcName)	Initializes a new instance of the <a href="#">OpcAnalogItemNode`1</a> class accessible by the <a href="#">name</a> specified as a child node of the <a href="#">parent</a> node given.
<a href="#">OpcAnalogItemNode`1</a> (IOpcNode, OpcName, OpcNodeId)	Initializes a new instance of the <a href="#">OpcAnalogItemNode`1</a> class accessible by the <a href="#">name</a> and <a href="#">id</a> specified as a child node of the <a href="#">parent</a> node given.
<a href="#">OpcAnalogItemNode`1</a> (IOpcNode, OpcName, OpcNodeId, )	Initializes a new instance of the <a href="#">OpcAnalogItemNode`1</a> class accessible by the <a href="#">name</a> and <a href="#">id</a> specified with the initial value defined by <a href="#">value</a> as a child node of the <a href="#">parent</a> node given.
<a href="#">OpcAnalogItemNode`1</a> (IOpcNode, OpcName, )	Initializes a new instance of the <a href="#">OpcAnalogItemNode`1</a> class accessible by the <a href="#">name</a> specified with the initial value defined by <a href="#">value</a> as a child node of the <a href="#">parent</a> node given.
<a href="#">OpcAnalogItemNode`1</a> (OpcName)	Initializes a new instance of the <a href="#">OpcAnalogItemNode`1</a> class accessible by the <a href="#">name</a> specified.
<a href="#">OpcAnalogItemNode`1</a> (OpcName, OpcNodeId)	Initializes a new instance of the <a href="#">OpcAnalogItemNode`1</a> class accessible by the <a href="#">name</a> and <a href="#">id</a> specified.
<a href="#">OpcAnalogItemNode`1</a> (OpcName, OpcNodeId, )	Initializes a new instance of the <a href="#">OpcAnalogItemNode`1</a> class accessible by the <a href="#">name</a> and <a href="#">id</a> specified with the initial value given by <a href="#">value</a> .
<a href="#">OpcAnalogItemNode`1</a> (OpcName, )	Initializes a new instance of the <a href="#">OpcAnalogItemNode`1</a> class accessible by the <a href="#">name</a> specified with the initial value given by <a href="#">value</a> .

# Events

Name	Description
AfterApplyChanges	Occurs after one or more changes on the node has been notified. (Inherited from <a href="#">OpcNode</a> )
BeforeApplyChanges	Occurs before one or more changes on the node are notified. (Inherited from <a href="#">OpcNode</a> )

# Properties

Name	Description
AccessLevel	Gets or sets a value which indicates in which ways the <a href="#">Value</a> attribute of the variable node can be accessed (read/write) and if it provides current and/or historic data. (Inherited from <a href="#">OpcVariableNode</a> )
ArrayDimensions	Gets the number/lengths of dimensions for an array <a href="#">Value</a> with one or more fixed dimensions. (Inherited from <a href="#">OpcVariableNode</a> )
Category	Gets the <a href="#">NodeCategoryOpcAttribute</a> which identifies the kind of node and is therefore used to classify the node regarding its use and purpose. (Inherited from <a href="#">OpcNode</a> )
DataType	Gets or sets a value which defines a pre-defined used <a href="#">DataTypeId</a> as one of the members defined by the <a href="#">OpcDataType</a> enumeration to simplify querying standard data types.
DataType	Gets or sets a value which defines a pre-defined used <a href="#">DataTypeId</a> as one of the members defined by the <a href="#">OpcDataType</a> enumeration to simplify querying standard data types. (Inherited from <a href="#">OpcVariableNode</a> )
DataTypeId	Gets or sets the identifier which identifies the node that defines the type of data represented by the variable node. (Inherited from <a href="#">OpcVariableNode</a> )
DefaultReferenceTypeId	Gets the default identifier which identifies the type that defines the underlying node reference within this <a href="#">OpcInstanceNode</a> is referenced by its parent node. (Inherited from <a href="#">OpcInstanceNode</a> )
DefaultReferenceTypeId	Gets the default identifier which identifies the type that defines the underlying node reference within this <a href="#">OpcInstanceNode</a> is referenced by its parent node. (Inherited from <a href="#">OpcVariableNode</a> )
DefaultTypeDefinitionId	Gets the default identifier which identifies the node that defines the underlying node type from that this <a href="#">OpcInstanceNode</a> has been created. (Inherited from <a href="#">OpcInstanceNode</a> )
DefaultTypeDefinitionId	Gets the default identifier which identifies the node that defines the underlying node type from that this <a href="#">OpcInstanceNode</a> has been created. (Inherited from <a href="#">OpcVariableNode</a> )
DefaultTypeDefinitionId	Gets the default identifier which identifies the node that defines the underlying node type from that this <a href="#">OpcInstanceNode</a> has been created. (Inherited from <a href="#">OpcDataVariableNode</a> )
DefaultTypeDefinitionId	Gets the default identifier which identifies the node that defines the underlying node type from that this <a href="#">OpcInstanceNode</a> has been created. (Inherited from <a href="#">OpcDataItemNode</a> )

Name	Description
DefaultTypeDefinitionId	Gets the default identifier which identifies the node that defines the underlying node type from that this <a href="#">OpcInstanceNode</a> has been created. (Inherited from <a href="#">OpcAnalogItemNode</a> )
Definition	Gets or sets a vendor-specific, human readable string that specifies how the value of this data item is calculated. (Inherited from <a href="#">OpcDataItemNode</a> )
DefinitionNode	Gets the <a href="#">OpcPropertyNode</a> '1 of the <a href="#">Definition</a> property. (Inherited from <a href="#">OpcDataItemNode</a> )
Description	Gets or sets the value of the optional <a href="#">DescriptionOpcAttribute</a> which shall explain the meaning of the node. (Inherited from <a href="#">OpcNode</a> )
Descriptions	Gets the <a href="#">OpcNodeGlobalization</a> instance used to control the localization and other globalization related tasks for the <a href="#">Description</a> attribute of the current node. (Inherited from <a href="#">OpcNode</a> )
DisplayName	Gets or sets the value of the <a href="#">DisplayNameOpcAttribute</a> which defines the localizable name of the node. (Inherited from <a href="#">OpcNode</a> )
DisplayNames	Gets the <a href="#">OpcNodeGlobalization</a> instance used to control the localization and other globalization related tasks for the <a href="#">DisplayName</a> attribute of the current node. (Inherited from <a href="#">OpcNode</a> )
EngineeringUnit	Gets or sets the engineering unit information which specifies the unit of the value attribute of the <a href="#">OpcAnalogItemNode</a> . (Inherited from <a href="#">OpcAnalogItemNode</a> )
EngineeringUnitNode	Gets the <a href="#">OpcEngineeringUnitInfoPropertyNode</a> of the <a href="#">EngineeringUnit</a> property. (Inherited from <a href="#">OpcAnalogItemNode</a> )
EngineeringUnitRange	Gets or sets the range information which applies to normal operation. (Inherited from <a href="#">OpcAnalogItemNode</a> )
EngineeringUnitRangeNode	Gets the <a href="#">OpcValueRangePropertyNode</a> of the <a href="#">EngineeringUnitRange</a> property. (Inherited from <a href="#">OpcAnalogItemNode</a> )
HasPendingChanges	Gets a value indicating whether there exists any pending change on the node. (Inherited from <a href="#">OpcNode</a> )
HistoryConfiguration	(Inherited from <a href="#">OpcVariableNode</a> )
Id	Gets the value of the <a href="#">NodeIdOpcAttribute</a> which unambiguously identifies the node. (Inherited from <a href="#">OpcNode</a> )
InstrumentRange	Gets or sets the range information which applies to the instrumental values returned by the instrument. (Inherited from <a href="#">OpcAnalogItemNode</a> )
InstrumentRangeNode	Gets the <a href="#">OpcValueRangePropertyNode</a> of the <a href="#">InstrumentRange</a> property. (Inherited from <a href="#">OpcAnalogItemNode</a> )
IsArray	Gets a value indicating whether the <a href="#">Value</a> of the <a href="#">OpcVariableNode</a> represented is an array. (Inherited from <a href="#">OpcVariableNode</a> )
IsHistorizing	(Inherited from <a href="#">OpcVariableNode</a> )
ModellingRuleId	Gets or sets the identifier which defines how the <a href="#">OpcInstanceNode</a> is used for instantiation. (Inherited from <a href="#">OpcInstanceNode</a> )

Name	Description
Name	Gets or sets the value of the <a href="#">BrowseNameOpcAttribute</a> which defines the non-localizable human-readable name used when browsing the address space. (Inherited from <a href="#">OpcNode</a> )
Namespace	(Inherited from <a href="#">OpcNode</a> )
Parent	Gets the parent node of the node. (Inherited from <a href="#">OpcNode</a> )
Parent	Gets the parent node of the node. (Inherited from <a href="#">OpcInstanceNode</a> )
PendingChanges	Gets a value indicating the most recent changes performed on the node since their last notification. (Inherited from <a href="#">OpcNode</a> )
QueryEventsCallback	Gets or sets a callback used to query any event information which belongs to the node. (Inherited from <a href="#">OpcNode</a> )
ReadAccessLevelCallback	(Inherited from <a href="#">OpcVariableNode</a> )
ReadArrayDimensionsCallback	(Inherited from <a href="#">OpcVariableNode</a> )
ReadDataTypeCallback	(Inherited from <a href="#">OpcVariableNode</a> )
ReadDescriptionCallback	(Inherited from <a href="#">OpcNode</a> )
ReadDisplayNameCallback	(Inherited from <a href="#">OpcNode</a> )
ReadIsHistorizingCallback	(Inherited from <a href="#">OpcVariableNode</a> )
ReadUserAccessLevelCallback	(Inherited from <a href="#">OpcVariableNode</a> )
ReadUserWriteAccessCallback	(Inherited from <a href="#">OpcNode</a> )
ReadValueRankCallback	(Inherited from <a href="#">OpcVariableNode</a> )
ReadVariableValueCallback	Gets or sets a callback used to read the variable value. (Inherited from <a href="#">OpcVariableNode</a> )
ReadWriteAccessCallback	(Inherited from <a href="#">OpcNode</a> )
ReferenceType	Gets a value which defines a pre-defined used <a href="#">ReferenceTypeId</a> as one of the members defined by the <a href="#">OpcReferenceType</a> enumeration to simplify querying standard reference types. (Inherited from <a href="#">OpcInstanceNode</a> )
ReferenceTypeId	Gets or sets the identifier which identifies the node that defines the semantic of the reference between a source and a target node and generally reflects an operation between the two, such as "A contains B". (Inherited from <a href="#">OpcInstanceNode</a> )
Status	(Inherited from <a href="#">OpcVariableNode</a> )
SymbolicName	(Inherited from <a href="#">OpcNode</a> )
Tag	Gets or sets the object that contains additional user data about the node. (Inherited from <a href="#">OpcNode</a> )
Timestamp	(Inherited from <a href="#">OpcVariableNode</a> )
TypeDefinitionId	Gets or sets the identifier which identifies the node that defines the underlying node type from that this <a href="#">OpcInstanceNode</a> has been created. (Inherited from <a href="#">OpcInstanceNode</a> )
UserAccessLevel	Gets or sets a value which indicates in which ways the <a href="#">Value</a> attribute of the variable node can be accessed (read/write) and if it provides current and/or historic data taking user access rights into account. (Inherited from <a href="#">OpcVariableNode</a> )
UserWriteAccess	Gets or sets the value of the optional <a href="#">UserWriteAccessOpcAttribute</a> which exposes the possibilities of a client to write the attributes of the node taking user access rights into account. (Inherited from <a href="#">OpcNode</a> )
Value	Gets or sets the value of the analog item node.

Name	Description
Value	Gets or sets the value of the variable node which may be simple or complex. (Inherited from <a href="#">OpcVariableNode</a> )
ValuePrecision	Gets or sets a value which specifies the maximum precision that the server can maintain for the item based on restrictions in the target environment. (Inherited from <a href="#">OpcDataItemNode</a> )
ValuePrecisionNode	Gets the <a href="#">OpcPropertyNode</a> '1 of the <a href="#">ValuePrecision</a> property. (Inherited from <a href="#">OpcDataItemNode</a> )
ValueRank	(Inherited from <a href="#">OpcVariableNode</a> )
WriteAccess	Gets or sets the value of the optional <a href="#">WriteAccessOpcAttribute</a> which exposes the possibilities of a client to write the attributes of the node. (Inherited from <a href="#">OpcNode</a> )
WriteAccessLevelCallback	(Inherited from <a href="#">OpcVariableNode</a> )
WriteArrayDimensionsCallback	(Inherited from <a href="#">OpcVariableNode</a> )
WriteDataTypeCallback	(Inherited from <a href="#">OpcVariableNode</a> )
WriteDescriptionCallback	(Inherited from <a href="#">OpcNode</a> )
WriteDisplayNameCallback	(Inherited from <a href="#">OpcNode</a> )
WritelsHistorizingCallback	(Inherited from <a href="#">OpcVariableNode</a> )
WriteUserAccessLevelCallback	(Inherited from <a href="#">OpcVariableNode</a> )
WriteUserWriteAccessCallback	(Inherited from <a href="#">OpcNode</a> )
WriteValueRankCallback	(Inherited from <a href="#">OpcVariableNode</a> )
WriteVariableValueCallback	Gets or sets a callback used to write the variable value. (Inherited from <a href="#">OpcVariableNode</a> )
WriteWriteAccessCallback	(Inherited from <a href="#">OpcNode</a> )

## Methods

Name	Description
<a href="#">AddChild(OpcContext, OpcInstanceNode)</a>	(Inherited from <a href="#">OpcInstanceNode</a> )
<a href="#">AddNotifier(OpcContext, IOpcNode)</a>	(Inherited from <a href="#">OpcNode</a> )
<a href="#">ApplyChanges(OpcContext)</a>	Notifies about changes performed on the node since the last notification and resets the pending changes to <a href="#">None</a> . (Inherited from <a href="#">OpcNode</a> )
<a href="#">ApplyChanges(OpcContext, Boolean)</a>	Notifies about changes performed on the node (and optionally on its children) since the last notification and resets the pending changes to <a href="#">None</a> . (Inherited from <a href="#">OpcNode</a> )
<a href="#">AttributeValue(OpcAttribute)</a>	Retrieves the value of the <a href="#">attribute</a> specified. (Inherited from <a href="#">OpcNode</a> )
<a href="#">AttributeValue`1(OpcAttribute)</a>	Retrieves the value of the <a href="#">attribute</a> specified. (Inherited from <a href="#">OpcNode</a> )

Name	Description
Child(OpcContext, OpcName)	Retrieves the child node its <b>Name</b> property matches exactly the <b>name</b> specified. (Inherited from <b>OpcNode</b> )
Children(OpcContext)	Retrieves a sequence of all nodes organized as children of this node. (Inherited from <b>OpcNode</b> )
InitializeDefaults	Initializes the default values used by the <b>OpcAnalogItemNode`1</b> .
InitializeDefaults	Initializes the default values used by the node implementation represented / required. (Inherited from <b>OpcNode</b> )
InitializeDefaults	Initializes the default values used by the <b>OpcInstanceNode</b> . (Inherited from <b>OpcInstanceNode</b> )
InitializeDefaults	Initializes the default values used by the <b>OpcVariableNode</b> . (Inherited from <b>OpcVariableNode</b> )
InitializeDefaults	Initializes the default values used by the <b>OpcDataItemNode</b> . (Inherited from <b>OpcDataItemNode</b> )
IsChangePending(OpcNodeChanges)	(Inherited from <b>OpcNode</b> )
OnAfterApplyChanges(OpcNodeChangesEventArgs)	Raises the <b>AfterApplyChanges</b> event using the event data specified. (Inherited from <b>OpcNode</b> )
OnBeforeApplyChanges(OpcNodeChangesEventArgs)	Raises the <b>BeforeApplyChanges</b> event using the event data specified. (Inherited from <b>OpcNode</b> )
QueryEventsCore(OpcNodeContext, OpcEventCollection)	(Inherited from <b>OpcNode</b> )
ReadAttributeValueCore`1(OpcReadAttributeValueContext, OpcAttributeValue)	(Inherited from <b>OpcNode</b> )
ReadAttributeValueCore`1(OpcReadAttributeValueContext, OpcAttributeValue)	(Inherited from <b>OpcVariableNode</b> )
ReadGenericValue(OpcReadVariableValueContext)	Reads the analog item node value using the <b>context</b> specified.
ReadValue(OpcReadVariableValueContext)	Reads the variable node value using the <b>context</b> specified. (Inherited from <b>OpcVariableNode</b> )
ReadVariableValue(OpcReadVariableValueContext)	(Inherited from <b>OpcVariableNode</b> )
ReadVariableValueCore(OpcReadVariableValueContext, OpcVariableValue)	Reads the value of the variable node using the <b>context</b> and <b>value</b> information specified. (Inherited from <b>OpcVariableNode</b> )
RemoveChild(OpcContext, OpcInstanceNode)	(Inherited from <b>OpcInstanceNode</b> )
RemoveNotifier(OpcContext, IOpcNode)	(Inherited from <b>OpcNode</b> )
RemoveNotifier(OpcContext, IOpcNode)	(Inherited from <b>OpcInstanceNode</b> )
ReportEvent(OpcContext, OpcEvent)	(Inherited from <b>OpcNode</b> )



Name	Description
UpdateChanges(OpcContext, OpcNodeChanges)	Notifies about the <b>changes</b> on behalf of the node and removes pending changes which intersect with the <b>changes</b> specified. (Inherited from <b>OpcNode</b> )
UpdateChanges(OpcContext, OpcNodeChanges, Boolean)	Notifies about the <b>changes</b> on behalf of the node (and optionally on its children) and removes pending changes which intersect with the <b>changes</b> specified. (Inherited from <b>OpcNode</b> )
WriteAttributeValueCore`1(OpcWriteAttributeValueContext, OpcAttributeValue)	(Inherited from <b>OpcNode</b> )
WriteAttributeValueCore`1(OpcWriteAttributeValueContext, OpcAttributeValue)	(Inherited from <b>OpcVariableNode</b> )
WriteGenericValue(OpcWriteVariableValueContext, )	Writes the <b>value</b> to the analog item node value using the <b>context</b> specified.
WriteValue(OpcWriteVariableValueContext, Object)	Writes the <b>value</b> to the variable node value using the <b>context</b> specified. (Inherited from <b>OpcVariableNode</b> )
WriteVariableValue(OpcWriteVariableValueContext, OpcVariableValue)	(Inherited from <b>OpcVariableNode</b> )
WriteVariableValueCore(OpcWriteVariableValueContext, OpcVariableValue)	Writes the value of the variable node using the <b>context</b> and <b>value</b> information specified. (Inherited from <b>OpcVariableNode</b> )





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